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HANDBOOK FOR PIONEERS



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Sweater Emblems

Upper designs—Pioneers

Center designs—Comrades

Buttons

Pioneer—Comrade—Leader

For value of colors, meaning of colored cords, numerals, and full explanation of insignia see second section of Appendix.

HANDBOOK FOR PIONEERS

A Program of Christian Citizenship Training for Boys Twelve to Fourteen Years of Age

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FOREWORD

Special attention has been given to make this program as acceptable and as usable as possible by volunteer leaders of boys who desire a Christian citizenship training program, whether in the Young Men's Christian Association, the Sunday school, or elsewhere.

Every suggestion for the still further improvement of it will be welcomed and the largest possible cooperation and partnership are sought, both in the using of the present program and in any further revisions or substitutions that may be desirable from time to time.

It is hoped that a joint commission will be appointed to develop a program of boys' work which will be representative of the best ideals, standards, and methods of the forces which are directly responsible for the religious education of adolescent boys.

ACKNOWLEDGMENTS

This program represents the labor of many men and has taken several years of experiment and study, as will be seen by reference to the Historical Statement, page 385.

We wish to express our grateful appreciation to the National Council of the Young Men's Christian Association of Canada for the use of text and illustrations from "Manual for Trail Rangers" and "Manual for Tuxis Boys," in addition to the chapters which carry acknowledgment in a footnote; to Ernest Thompson Seton for permission to use the chapter "Fifty Common Forest Trees of Eastern North America," as printed in the "Woodcraft Manual for Boys"; to B. Deane Brink for chapter on "Aquatics"; to George O. Draper for chapter on "Games"; to H. W. Gibson for chapter on "Camping"; to R. G. Cole, Herbert L. Crate, Henry G. Hart, C. B. Loomis, and Harry T. Baker for biographical sketches; to C. C. Robinson, A. N. Cotton, C. H. Hagenbuch, C. J. Carver, Leonard Paulson, L. K. Hall, D. C. Drew, and other members of the International Committee staff for

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The International Committee of
Young Men's Christian Associations

Edgar M. Robinson,
Secretary, Boys' Work Division.

CHAPTER I

ALL ABOUT THE PROGRAM

Every boy knows men whom he greatly admires. These men have made a success, in some way, and the boy naturally admires men who succeed.

Naturally, as he thinks about one of these men, he begins to ask, "How can I learn to be like him?" Now there are some men who are making a better success of life than others, and it is a fine thing for a boy to learn what enters into real success.

A man may be rich and yet not be a real success; a man may be strong physically and yet not be a great success—that is, genuine success includes a number of things. The possession of money may be a part of it, but many a rich man has a weak or sickly body, and would give all his money to be well. Many a man strong physically, is ignorant, and would give everything he has to have more knowledge and a trained mind.

After all, isn't the kind of success we are talking about dependent a good deal on having a fine foundation for life, broad enough to build anything on later? If a man lays a foundation of physical, mental, social, and spiritual strength, isn't that the best kind of a preparation for life—one that will enable him to specialize successfully in any direction in which he is interested?

But some boys do not grow to manhood in as fine a way as they should. They grow physically because they cannot help doing so; but they may let one set of muscles get strong while another set is allowed to be underdeveloped. They grow mentally, because they have to, and their school work helps them to grow mentally as they should; but very often a boy does not learn what a world of interesting things there is in the mental world outside of schoolbooks.

Many boys do not begin to understand what great possibilities there are in growing on the spiritual side until they get much older; and then they wish they might have learned all about these things long before. As to a boy growing socially, getting to

know more day by day about how to get along happily with others and how to make his life count most in helping others—why, many a boy does not begin to think of these things, and to get the real joy of living, until he has missed many years.

Now this Program, of which the Pioneer Group is but the first part, will help a boy to learn how to lay the foundation for his life on this all-round basis; will help him to grow mentally, physically, devotionally, and socially. That is what this Program makes possible for a growing boy. How does it do this?

The first thing is to become a member of a group or club in the church school or elsewhere that is following this Program. If he does not know of such a group, he may help to start one. When he joins such a club, he may be asked to sign a Declaration of Purpose, like this:

> "As a PIONEER I purpose to be manly in muscle, mind, and morals, as a foundation for Christian living."

In order that the full plan of the Program shall be understood, a boy who is just beginning should be able to repeat the following:

THE AIMS OF A PIONEER

1. As a PIONEER I aim to seek health, for the true American Boy seeks to gain and to keep health.

2. As a PIONEER I aim to be self-controlled, for the true American Boy seeks to control himself.

3. As a PIONEER I aim to be self-reliant, for the true American Boy, although he despises self-conceit, never says "can't."

4. As a PIONEER I aim to be absolutely reliable, for the true American Boy is always honest in word and deed.

5. As a PIONEER I aim to play the game clean, for the true American Boy is always fair.

6. As a PIONEER I aim always to do my duty, for the true American Boy is never a shirker.

7. As a PIONEER I aim to be thorough, for the true American Boy does the right thing in the right way.

8. As a PIONEER I aim to play a team game, for the true American Boy always works in friendly cooperation with his fellow-workers.

9. As a PIONEER I aim to be always kind, for the true American Boy is always thoughtful of his speech and acts toward others.

10. As a PIONEER I aim to be reverent, for the true American Boy knows there is but one Creator and that He cares for all life.

11. As a PIONEER I aim to be loyal in all my relationships, for the true American Boy is always loyal to the very best he knows.

Of course, there will be an adult *Leader* of the group. (There is a special *Manual for Leaders.*) Almost the first thing such a *Leader* will do will be to have a little talk with the boy, to see at what point the new member is best able to begin. This personal talk will consist of asking some questions as to how far the boy has already developed in the four ways mentioned above. And merely to get a starting point, the *Leader* will compare the boy's present accomplishments with a standard for boys of the same age, and will estimate in credits about where the boy stands. Then he will mark these credits on a chart.

The square outline of the chart below is the standard toward which the boy is to work; he wants to be four-square, or symmetrically developed. As the *Leader* talks with him it is discovered that this particular boy may not have developed on one side of his life as much as he might; and when the talk is over, and the *Leader* puts the results on the chart, the boy will see at once where he needs to pull himself up a bit.

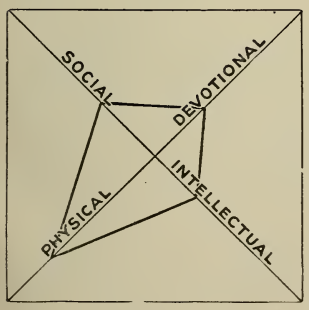


Fig. 1

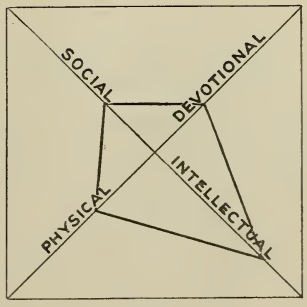


Fig. 2

Let us take a few examples of the way it works, as shown by other boys who have been charted: Here is a boy who has given a great deal of attention to athletics, but has neglected his mental life. He has not been very high in the two other standards, either. This is the way his chart would look when he is through the interview (Fig. 1):

Here is another fellow who has given a good deal of attention to his studies, but isn't as careful as he should be about his physical life. He doesn't go in for any kind of athletics and is hindered from being his best by a pretty poor kind of a body (Fig. 2):

Another boy has been working since he was fourteen years old. He has not followed up his studies at all; of course, his mental development is rather low (Fig. 3):

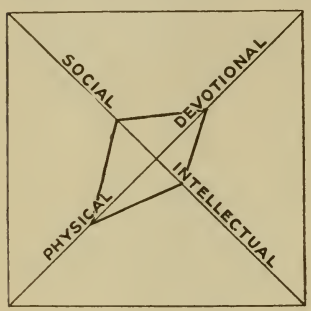


Fig. 3

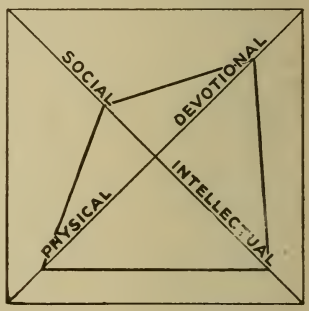


Fig. 4

This last boy has done good work at school, has made good in athletics and physical development, and is a regular attendant at church and the church school, getting a good deal of help from these exercises; but he admits that he has been living pretty much for himself and has not learned very much about the social side of life, and about service for others. Do you see what kind of a chart he draws?

But the personal talk and charting is just the beginning of the Program. For, after all the boys of the group have been charted, and the Program for the season is worked out, each individual boy will be given some definite test to meet. For instance, in the

program of Intellectual Development (see page 7), the boy's standing at school will be made the test on which his credits are marked.

Out of a possible 300 credits in the School Test, he can secure 150 for his school record. But he can get 150 more credits by meeting the optional tests found under the heading of "education"; with the required test and the optional tests taken together he can therefore secure as many as 300 to the credit of the Education Test. This same arrangement is carried out through the entire Program.

Many of the things required will be done in the weekly group meeting. Social stunts and games and hikes and outings, together with the most interesting practical talks, will all be part of the group Program. Besides all this there will be games and contests between groups, and outings where all the boys in the community who are taking the Program will get together.

Any boy who is especially interested in some subject or some kinds of activity will find a further opportunity to show his interest by earning Service Recognitions, which are told about on page 56.

A boy who is taking this Program is privileged to wear a button or badge, as described in the special chapter on Insignia. By turning to the description of these emblems you will see that the square shows exactly how each boy stands in his regular tests, and also shows how far he has gone in taking Service Recognitions.

A large group emblem, for the entire group or club, will show the standing of all who are taking the Program; every creditable thing accomplished by a member of the club will help to earn a better group emblem.

There are many useful and most interesting facts in the pages beginning with Chapter VII of this book. By reading these chapters carefully a boy will find helpful hints which will enable him to carry out his part of this Program successfully.

The PIONEER Group is followed by the COMRADE Group, which is intended for boys from fifteen to seventeen years of age; so there is a chance to work into this older group when the right time comes.

The most wonderful man who ever lived was Jesus. As a boy, He must have known a lot of interesting things; for when He reached manhood, and began to preach, He showed that He knew a great many things that real live boys are likely to learn as they go about with their eyes open in the city and in the country, at school and at play, at home and on their travels.

So it becomes a very interesting question as to how Jesus grew, as a boy. After He was twelve years old, do we know anything about Him? Well, not much; and yet, in some ways, we know a good deal. For the Bible tells us, in Luke 2:52, that "Jesus advanced in wisdom and stature, and in favor with God and men." That is all we are told about Him in the years from twelve to almost thirty.

But that is enough to tell us a good deal that is valuable. For it tells us that he grew mentally ("in wisdom"), physically ("in stature"), and in his devotional life ("in favor with God"), and in his social life ("in favor with man"). And those are about the only ways a boy can grow.

CHAPTER II

THE INTELLECTUAL TRAINING PROGRAM AND ACTIVITIES

"Jesus advanced in wisdom"—Luke 2:52.

Crude oil is worth two dollars and a half a barrel, but kerosene is worth twice as much; yet kerosene is but crude oil refined. Gasoline, on the other hand, is worth twice as much as kerosene because it is still *further* refined. Crude oil refined to lubricating oil, however, brings more than thirty-five dollars a barrel or more than ten times as much as crude oil. Intellectually, boys, you are in the "crude oil" stage; whether you will finally reach the "lubricating oil" stage or not will depend almost entirely on the kind and amount of refining to which you are willing to submit yourself. A great many boys are not willing to go through the refining or educating process. They are quite content to be just "kerosene" all their days. That is very strange, too, when we live in a country that provides free the very best schooling that money can buy. Education is the only thing given away and you can have all that you will take.

Boys should have someone remind them, very often—in a helpful way, of course—that their entire future depends very largely on how they develop their minds during their boyhood days. Sometimes study of every kind seems so removed from daily living that there comes a real temptation, as you know, to sacrifice it temporarily for, say, the baseball team, or a good swim, or a hike into the open country, or perhaps a job. That's the easy way. But it is following the line of least resistance and is short-sighted. That sort of thing is what keeps many a boy "kerosene."

Probably the most important job any PIONEER now has on his hands is to make good at school, not for credit's sake, but for development's sake. The boy who is determined to become "lubricating oil" must appreciate the need of refining so clearly that his school to *him* will be an opportunity instead of a burden.

A PIONEER must begin to think, judge, and act for himself. His childhood days are over. He is headed straight for manhood,

but a man's value to himself as well as to the world depends on how clearly he can think, how fairly he can judge, and how wisely he can act. If his mind is untrained, if he is still "crude oil," others leave him behind. The world demands trained men.

Generally speaking, there are two sorts of training: one sort that has to do with fitting one's self to do high-class and efficient work in some profession, business, or trade; the other sort that has to do with getting acquainted with a great many things that will broaden your mind and widen the range of your interests, so as to enable you to understand and appreciate more fully what goes on in the great world about you.

Did you ever ask questions? Of course you have. No doubt you have embarrassed your father many a time by asking questions he could not answer. Those questions are just your "crude oil" asking to be refined.. There is mighty small chance for the boy who cannot ask a hundred questions about a thousand things. Questions prove that a boy's "refinery" is hard at work and that he is seeking to grow.

Now a PIONEER will no doubt get the bulk of his intellectual training in public or high school, yet not all, for there are many other ways in which he can learn much. Nature is a wonderful teacher and she knows so much that is worth while. The PIONEER will very soon discover that all of the following tests are to stimulate him intellectually—in many different directions it is true, but all to the purpose that he too may "advance in wisdom," as did the boy Jesus.

Note

If you have had Boy Scout training or have been identified with any similar organization, your Leader will grant you full credit for all the work you have done in that organization that corresponds to the tests required in this Program whether in regular activities or on special Merit Badges, provided you have taken the same under a registered or competent Leader within a reasonable period.

I. SCHOOL

President Hyde, of Bowdoin College, at the age of fourteen received a man's wages in a cotton mill, with promise of rapid advancement. The boy had neither father nor mother living and

the decision rested entirely with himself. He took his school training and became one of America's foremost educators.

If boys would only remember that what they really work with is not their hands but their brains, they would not imagine that time spent in school cultivating their brains is thrown away.

True, some men have made good in the world who did not go to school, but their number, compared with the successful men who did go to school, is so small that it is no longer an argument. The very first question every employer asks is: "What schooling have you had?" What will be your answer?

"Thoroughly trained men are woefully lacking in every vocation." There is plenty of room at the top, but at the bottom there is always a "jam." America needs trained men as never before to handle the multitude of after-the-war problems. Can she depend on you to be ready, or will you be content to drive a delivery wagon or run an elevator while the more determined, far-sighted boy rises to world-usefulness because he took his training?

The law of use is universal. If you want to win honors as an athlete, you train vigorously. No price is too great to pay. If you want to deal with great problems and know how to handle men and materials, you must train. It is necessary to be physically fit, as a foundation. It is also necessary to be mentally fit—along with some other sorts of fitness that are to be discussed later—in order to live a life. Mental health comes by mental exercise.

There certainly will be a real place of national usefulness for every PIONEER who puts his best into training. Grades are not always so important as effort, and don't forget that participation in school activities is also a part of one's education. Get into the sort of activity that is most worth while. Put a lot into it, so you can get a lot out of it.

Now, of course, there are boys—high-class, ambitious, wide-awake boys—who would like to go to school, but who for one reason or another are unable to do so. If you happen to be such a boy talk your whole situation out with your LEADER. He will be able to make many helpful suggestions. If your circumstances are such that you must work, then it is highly important that

your job be the kind with a future and one that gives you mental growth as well as financial income.

SCHOOL.....Total Credits—300

REQUIRED TEST—Maximum of Credits—150
Normal attendance at school (one grade a year)—10 credits.
Effort—30 for fair, 50 for good, 70 for excellent.
Scholarship—30 for fair, 50 for good, 70 for excellent.

ELECTIVE TESTS—30 credits each

1. Participate in school athletic activities.
2. " " " dramatic activities.
3. " " " oratorical and debating activities.
4. " " " literary activities, orchestra, or choir.
5. " " " organized welfare activities.
6. Attend an educational talk or discussion or read a book on:

 a. The Real Value of an Education (first year).
 b. The Value of a High School Education to the Boy Who Expects to Live on a Farm, or equivalent (second year).
 c. How Can an Education Make Any Man a Better Citizen? (third year).

II. HEALTH EDUCATION

The most wonderful machine in all the world is your body. Did you ever watch a great engine perform? Did you ever ride behind a motor that seemed to be perfect, with power enough to go anywhere or do any sort of work? Did you ever look through a giant telescope and marvel at the machine that can bring the heavens close enough to study? Did you ever see a mighty pump at work, lifting and distributing life-giving water perhaps for a whole city of people? Have you ever wondered how an adding machine could perform such seemingly intelligent acts? Have you ever marveled at a splendid talking machine or heard a friend's voice coming to you over the wires from, say, a hundred miles away? Of course you have, but did you ever stop to think that your very own body is a machine that has all of these extraordinary functions, with numerous others that are so marvelous

and complicated that they cannot even be understood? Truly, we are wonderfully and marvelously made.

A locomotive engineer is a man who so thoroughly understands the principles of an engine that it is perfectly safe to allow him to pilot one, drawing, as he so often does, great loads of human freight across the land in the dead of night, or perhaps even in a storm. Would you go to sleep quietly on a fast express if you were assured that the engineer up in the cab had no idea at all about scientifically handling his engine; if you knew positively that he didn't know how to control the steam or determine the speed or operate the brakes? I guess not! Would you think of starting off to drive, say, sixty years—that's a good long life—in a wonderful, high-power automobile if you had not been taught how to drive? About the first thing you'd do would be to wreck the big beautiful thing—all because you didn't understand the principle of the machine. Our hospitals and homes and sanitariums by the hundred are full of human wrecks, simply because these people had never been taught how to handle their bodies properly.

Every PIONEER wants to understand clearly the general laws about "running" his wonderful machine: first, so that it will make a useful, productive life possible and, second, so that his "machine" will not be a constant danger to others. Just as we must have strict traffic regulations to avoid collisions and death, so we must have strict health regulations. Every boy must know these regulations. It is amazing how simple they are and how easily they may be reduced to habits, when a boy just understands them. For instance, *there is the law of exercise.* Machinery runs better and lasts longer when given reasonable use.

"Who is your doctor?" said one man to another. "You always seem to be in the very pink of condition."

"Dr. Sunshine," replied the healthy man with a smile. "He prescribes thirty minutes a day on the woodpile out in God's out-of-doors. It costs less than medicine and is much more pleasant to take."

BEGINNINGS OF LIFE

Above all things be sure that you have reliable information about the beginnings of life. God has a marvelous plan for per-

petuating every living thing. There is a male and a female flower. There is a "father" and "mother" of every species of fish, fowl, and animal. There are great laws of reproduction. If these laws are broken, disaster results. By understanding these laws, various species can be greatly improved. Luther Burbank, with patient research and untiring labor, has by his skilful hand produced many new varieties of flowers and fruit. It is open to everyone to study the wonderful process whereby the pollen or powdery element of the male blossom is carried by the wind, by the water, by the bees, or in some other way, so that it rests upon the female portion of the blossom and in time the male portion dies and the female bears fruit after its kind.

In the body of a female fish we have all found what is known as the roe and marveled that one fish can produce from these eggs thousands of its kind. But what added interest there is when we know that in the spring these eggs are deposited in the gravel bottoms of shallow streams, where they would die if the male fish did not come and add to them the life-giving element from his body. Everyone knows how the bird by the warmth of its body hatches the little ones from the egg, but he should know what part the male bird has in the marvelous process. And so on, up through the various orders of creation to man, the student of the beginnings of life finds never-failing interest and amazement when he learns in detail God's marvelous plan.

Every PIONEER should, with the aid of his parents, his teachers, or his *Leader*, learn more and more of these great laws and come to have the right attitude toward them. Carefully avoid all smut and vulgar talk. Be correctly informed.

HEALTH EDUCATION.....Total Credits—200

REQUIRED TEST—Maximum of Credits—100

Read Chapter on Health Education—50

Talk with parent or authorized substitute on Life's Origin—50.

ELECTIVE TESTS—25 credits each up to 100

1. Name and explain five fundamental laws of health.

2. Name five vital functions of the body and describe the process of each.

3. Investigate and write or tell in 200 words how your city disposes of its garbage (first year).

4. Draw a diagram showing how the house-fly carries disease (second year).

5. Investigate and write or tell in 200 words the process of pasteurizing milk (third year).

6. Attend two group meetings each year at which one of the following books is read aloud: 25 credits each

"Developing into Manhood"
Winfield S. Hall (first year).
"Truths"..... E. B. Lowrey (first year).
"Life's Beginnings".... Winfield S. Hall (second year).
"Chums"..... Winfield S. Hall (second year).
"From Youth into Manhood"
Winfield S. Hall (third year).
"Confidential Talks with Young Men"
L. B. Sperry (third year).
"Keeping in Condition".... H. H. Moore (third year).

7. Attend an educational talk or discussion, or read a book on:
How to Build a Strong Body (first year).
How to Eat, When to Eat, and What to Eat (second year).
How We Grow (third year).

III. SPEAKING AND HOME READING

"A thoughtful man will never set
His tongue a-going, and forget
To stop it when his brain has quit
A-thinking thoughts to offer it."

Can you express your thoughts clearly, briefly, and in an interesting way? If you can, you have a good start toward success.

"Blessed is the man—or boy either—who, having nothing to say, abstains from giving wordy evidence of the fact." A certain boy once, returning from a lecture, was asked by his father what Professor So-and-So talked about. "About two hours," was the boy's reply. "Well, what did he say?" persisted the interested father. "Nothing," was the lad's final retort.

Public speaking is more than the ability to say so many words a minute for a given period of time. It is a fine art, which is very desirable, and in which every boy should be reasonably well versed. The time to begin to express your thoughts is when you are a boy. To be a clear and interesting speaker is a tremendous asset to leadership, but to be a good speaker demands two things: having something worth while to say and practicing the saying of it. There is hardly a business or profession today in which being able to express yourself well is not of inestimable value.

It is interesting to note, too, that men who are good speakers usually are good readers. "Tell me what you read and I'll tell you what you are." From reading come your ideas, your convictions, your impressions, your expressions. Reading is to the mind what exercise is to the body. Worth-while ideas and reliable information, of course, come from good books; therefore, some care must be used in your choices in this connection. Read carefully Chapter XI in this manual.

Self-expression ought to be a part of any Intellectual Training Program. The more difficult it is for you to express yourself, the more you need to master this part of the Program.

SPEAKING AND HOME READING...Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Make a three-minute speech on an assigned topic.

Read one book each year from each main head of the selected list in Chapter XI, this manual.

ELECTIVE TESTS—25 credits each up to 50

1. Read regularly one first-class boys' magazine: such as, *Boy Life*, *American Boy*, *Youth's Companion*, *St. Nicholas*, or others.

2. For a period of three months, read all that you can find in newspapers and magazines, along any specialized lines—such as, stock-raising, ship-building, wireless, aviation, corn-growing —and make a scrapbook or file of the interesting material, finally exhibiting it to your groups.

3. Recite an acceptable poem or prose selection of at least one hundred words.

4. Compete in debate or oratorical or declamation contest in your own group, or in group competition.

IV. NATURE INTERESTS

What can you tell of the big out-of-doors? Are you well enough acquainted with the folks in the wilderness so as to feel at home alone in the woods? The book of nature is a big, big book and we can read the chapters that appeal to us most, but to read some chapters is plainly the duty of all. No man is really educated who knows nothing of flowers, of birds, of trees, of butterflies, insects, and such things. Besides, we must never forget that all of these wild folks are very closely related to our lives, at least in an economic way. We kill our birds and as a result we have great pests of worms and destructive insects. We cut our trees and we have floods. We tear up our wild flowers, and weeds take their place.

Every boy should have a certain amount of nature knowledge. Woodcraft helps us in a wonderful way to use our eyes and our ears and our noses. The Indian was only able to live at all because he was a student of nature. He found his food wild. He made his clothes from material from the wild. He built his shelter from wild wood material. He found his games in the wood and on the water. He knew how to *smooth* it with rough things. He became resourceful to a marked degree. There is a great danger that the American boy will become too much of a hothouse plant—too much house and too much clothes and too much food. "When ye houses were made of straw ye men were made of oak, but when ye houses were made of oak, ye men were made of straw."

There is many a city lad—and country boy, too, for that mat ter—who can not identify five different trees in full leaf. On one acre of woodland in a central western state there were thirty-nine kinds of trees and shrubs. Although there are hundreds of wild flowers, many boys can name but two or three. There is nothing more interesting in the whole out-of-doors than the hundreds of insects; yet to most boys they are all "bugs." Have you ever found a cocoon and saved it until the wonderful moth emerged? Have you ever seen a worm construct its chrysalis and then hang it in the sunshine until the monarch "comes out" in his suit of burnt orange and black? Have you ever watched a mud dauber wasp build her castle of clay and stuff it full of

spiders to feed the young wasps in the spring? Have you ever watched a mosquito hatch on a stagnant pond? Have you ever caught an ant high up in a tree, milking its cow? Then open your eyes! Wake up, go out, and look around. There are wonderful folks in fairy houses all about you, that far exceed in real interest the best man-made entertainment in the world. *Nature Interests* are not a fad, but a very real part of life. If you are missing them you are missing a great deal.

NATURE INTERESTS..... Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Collect thirty nature specimens from water, woods, and fields and name each correctly, telling briefly about each. (A written report with specimens may be accepted if desired.)

ELECTIVE TESTS—25 credits each

1. Attend an educational talk or discussion, or read a book on:
 God's Great Out-of-Doors (first year).
 The History of Fire and How to Make Fire with Rubbing Sticks (second year).
 Our Forests and Their Protection (third year).
2. Read any standard nature book.
3. Write or tell in some 200 words about some specific nature observations of your own.

V. HANDICRAFT

Did you ever transform an old baby-buggy into a wagon, make a grocery box into a sled, or build a bench or a stool? Did you ever build a rabbit-hutch or a dove-box or perhaps even a chair or a music-rack or a swing? If you have, then you are a real boy. Did you ever leave the hammer out in the dirt or forget Father's best saw in the rain or run into a rusty old nail with the only gimlet on the place? Did you ever ruin the family screwdriver by using it for a cold chisel, or did you ever chop your toe trying to split a board? If you have, then you have had a beginner's course in handicraft and you'll be thankful all your life for the experience.

Most boys like to make things. Every boy enjoys tools if he just has a chance to use them. Once there were two boys shut up in a city with no backyard save a small cement court, and those two boys gratified their handicraft desires by taking their bicycles apart, including the coaster brakes, just so they might put them together again. Learn by doing; it is the best way in the world, and around most homes there is plenty of chance to see what you can do. Mother needs shelves here and there, or a porch-box for her flowers, or a wash-bench, or a bit of fence about her favorite roses. Then there are electric bells that won't ring and fuses that burn out, and doors that won't latch—they all get out of fix just so you will get some chance to practice handicraft, but remember there is just one law for a real craftsman, and that is careful work. Putty and sandpaper, along with a little paint, often make a job look fairly well, but you have the consciousness that it is a botch job. Make things? Yes, but apply three tests always: Is it careful, thorough work; what is it good for; and are its lines symmetrical and good? The real craftsman is an artist and loves the beautiful in form, finish, and material. Aim to be a craftsman.

HANDICRAFT.....Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Have access to at least eight different wood-working or mechanical tools, give evidence that you understand the care and use of each, and that you have done a total of two hours' work at home or for your neighbor that could properly be termed handicraft.

ELECTIVE TESTS—25 credits each up to 50

1. Read each year one of the "What to Do" books listed on page 30.

2. Read regularly an applied mechanics magazine: such as, *Popular Mechanics*, *Popular Electricity*, *Motor Field*.

3. Enrol in a manual training or arts and crafts class for a three months' period.

4. Attend a practical talk or a discussion, or read a book on:

The Evolution of Tools from Primitive to Modern Times (first year).

From the Apprentice System to the Age of Machinery (second year).

The Effects of Machinery on the World (third year).

5. Construction—10 credits each

Manual Training.

A towel roller, broom holder, tooth-brush rack, rolling pin, milk stool, wood-box, tie-rack, or equivalent.

Bird Houses.

Construct and erect a bird house for a specific type of bird. (Double credit if nest is secured.)

Kites.

Build and fly successfully any given type of kite.

Industrial Crafts.

Build a model boat, a wagon or cart, dog house, bob sleigh, snow scraper, shelving, cupboards, etc.

VI. OBSERVATION AND COLLECTION

Almost every boy is a natural-born collector. His room, if he is fortunate enough to have one, is usually full of collections of one kind or another. There was once a boy who collected collar buttons and he had a great variety, but there was something wrong with that sort of collection. It had no value either in the collecting or after the collection was made. Another boy collected birds' eggs and tobacco tags. He, too, was on the wrong track. It is a shame to steal birds' eggs, and tobacco tags are nor only useless but do not suggest the best things.

Stamp collections are very popular and very much worth while, too. Coins are interesting and have real worth. Minerals are very much worth while. Indian arrow-heads teach history, and open up the whole study of Indian life and early days. Pressed flowers and leaves, samples of wood, nuts, grains, and seeds are all worth while because of the information that is gathered in making up the collection. But there are other things that make collections worth while. They teach one to be orderly and systematic. They stimulate close observation and better memory. A certain chap has 5,000 different postage

stamps. He knows them by heart; he has learned to see minute differences in design and color. He can look at any number of stamps not his own and tell at a glance if he has them in his collection. He has come into possession of a vast amount of information as a result of his collection. His geography is very real to him, too. His history is more intelligent, his world-interest is much larger than it would have been, and then, too, just think of the happy stormy days and winter evenings that are represented in that neat, well-mounted collection. Collections of worth-while things are always valuable to any wide-awake boy, if they help him to be a better observer and give him in return for his pains the habit of careful, systematic work.

OBSERVATION AND COLLECTION...Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Make a collection of one of the following and offer it for inspection at a regular meeting of the group:

Coins, stamps, minerals, noxious weeds, leaves of shade and forest trees, crops of your section, pressed and mounted wild flowers, grains, clovers, grasses and forage plants; relics such as arrowheads or Indian implements; samples of wood, showing bark, grain, and cross grain; kodak pictures taken and finished by yourself; insects, butterflies, and moths.

The collection must contain at least twenty-five specimens neatly labeled.

ELECTIVE TESTS—25 credits each up to 50

1. Name and locate accurately ten office or public buildings in your city or county.

2. Name ten consecutive streets in your city correctly, other than numbered or lettered streets.

3. Place twenty-five small articles on a table, cover them with a cloth, uncover them for one minute while the boy observes them, then cover and have him write a list of the articles.

4. Pass three shop windows, stopping half a minute to observe the articles in each window, then write what you saw.

5. Go into an absolutely strange room, remain one-half minute, and then write a list of observed articles.

6. Take two checker-boards, the *Leader* using one board, the boy the other. Let the *Leader* place five checkers in any design he wishes; allow the boy to observe it ten seconds, cover the checkers, and allow the boy to reproduce the design on his own board. Repeat five times. (Paper and pencil may be used if boards are not handy).

7. Take the boys to the top of a hill in the open country. Let them observe the landscape for five minutes; on coming down locate on a sheet of paper the houses, barns, woods, water courses, and other prominent features.

VII. EDUCATIONAL TALKS AND TRIPS

"Know something about everything and everything about something" is a good motto for any mentally awake boy. We live in such a big and interesting world in which there is so much going on that no one boy can have very much information from many different fields, first-hand. Our job is not to attempt to *do* so many things that we accomplish nothing that is outstanding; on the other hand, we ought to be veritable sponges for new and interesting information. If some explorer comes to town, be very eager to hear his story. Perhaps he is just back from the North Pole or from the heart of Africa. Probably you will never be so fortunate as to travel there yourself, so go hear about it. Perhaps a great soldier from the World War has just come to town. You may be sure he has something to say that is worth while. Or maybe the President or a member of his cabinet is to speak at such and such a place. You may not understand all he says, but he is worth going to hear. Success is as contagious as smallpox. Perhaps you'll get an idea, and one single idea planted unsuspectingly in a boy's mind has changed the life of a whole community. Big ideas make big men. Be a collector of ideas. Some day they will all come handy. Every successful man in every line of work has a message for you. But he can't give it to you unless you go after it.

Travel is another way to gather much useful information as well as many ideas. Take frequent little trips—always with "eye-gate" and "ear-gate" wide open. Travel is a great educator.

Walk, ride your bicycle, go on horseback, always with a purpose —to gather new ideas, facts, impressions. You are never too old to learn.

EDUCATIONAL TALKS AND TRIPS..Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Report briefly, verbally or in writing, the last educational talk you heard or trip you took.

ELECTIVE TESTS—25 credits each up to 50

1. Attend an educational talk, or discussion, or read a book on:

 Early History of Your Locality (first year).
 Wireless (second year).
 Aviation, or other mechanical process (third year).

2. Attend a practical talk by some one qualified to speak on exploration, invention, travel, science, being a soldier, and give a brief review of the talk.

3. Make one trip a year to some sort of manufacturing plant and write 150 words describing the product and how it is made.

4. Travel at least 100 miles and spend one night away from home.

5. Drive auto, motor cycle, or motor boat twenty miles on any one trip, making all necessary tire changes, and at least temporary repairs.

CHAPTER III

THE PHYSICAL TRAINING PROGRAM AND ACTIVITIES

"Jesus advanced . . . in stature"—Luke 2:52.

William Cullen Bryant kept himself in a healthy bodily condition up to an extreme old age by taking long daily walks and by swinging a chair as a substitute for Indian clubs every morning, no matter how busy he was or how hard pressed for time. Bancroft, the great historian, kept his body in fine physical trim by daily horseback rides; while Mr. Gladstone was able, at a ripe old age, to perform enormous mental work by the physical stamina which he maintained by cutting down trees in his park.

There is not a boy in the land, and certainly not a PIONEER, who is not eager and anxious to have a healthy, strong body. For health means "pep" and to be a real winner one must have "pep."

"But do not expect to have health without effort. Nothing in this world worth anything can be had without paying for it in time and effort. Health is the prize of constant struggle." "The glory of a young man is his strength." To have health does not necessarily mean that one must develop great, heavy muscles. It is *quality* of muscle, not *quantity*, that a boy should be interested in. Nature, knowing how important it is for us to be healthy, has packed full of fun all the things which will help us to be strong and well. All sorts of out-door games and such events as hikes, camps, canoeing, swimming, and many others, are all fun and great health-givers. Fresh air, sunshine, and exercise are the best medicines in the world and they are cheap. Use them freely.

We must not get the idea, however, that we find health only in play, for there is also health in work, when it is entered into with real zest and when there is a consciousness that it has been well done. We should build for ourselves in boyhood such a store of health and physical energy that all our work in the world will be but serious play. Our bodies are the houses in which our souls live. Let's build such a good house while we're at it that our souls

can be wonderful, happy, comfortable souls all our days, and let's not have to be taking "time off" to patch and repair and make over that house every now and then. If we are ambitious to do great things in the world, and of course every PIONEER is, then let's be very much in earnest about getting into the game ourselves. "Sitting in the grandstand" will not help much to develop health and vigor.

The Christ was a wonderfully healthy boy and consequently a man with a splendid physical body. You don't hear anywhere of His being sick. He simply radiated health wherever He went. It made people better to just look at His trim, well-built, symmetrical body. He could walk long distances and required a very small amount of food. He could lie down and sleep anywhere with a stone for a pillow. What an impression He made that day when, single-handed, He drove the mob of peddlers and money-changers from the temple, upsetting their benches and driving out their sheep and goats. No man resisted Him. They were afraid. His was a powerful personality. He was able to back up His convictions with His splendid physical body. A coward is usually a weakling. "My son, despise a yellow streak" is good advice, and one of the best ways to be sure there is no "yellow streak" is to build for yourself a splendid, healthy body.

Most of us have healthy bodies. We inherit them from our parents. Our part of the task is to keep them healthy and further develop them so that, in turn, we too may pass this wonderful heritage of "sound body, mind, and soul" on to our children.

Good health means happy, joyous lives, filled with unselfishness and good will toward all. Evil thoughts, selfishness, malice, and envy, along with anger and hate are poisons to health. They cannot live in a physical house such as Jesus developed for His soul.

Note

If you have had Boy Scout training or have been identified with any similar organization, your Leader will grant you full credit for all the work you have done in that organization that corresponds to the tests required in this Program, whether in regular activities or on special Merit Badges, provided you have taken the same under a registered or competent Leader within a reasonable period.

I. HEALTH HABITS

A great many of the things we do and say and think over and over again become habits. Our lives are full of habits—good habits, and, unfortunately, sometimes bad habits. Most bad habits begin as carelessness. It's just as easy to form good habits as bad habits. "Have your habits fighting for you, instead of against you." So put into your life only the habits you wish to keep. Health is the result of good habits. Good posture can become a habit, cleanliness can become a habit. Temperance in all things can become a habit. Bathing, and cleaning your teeth, and being cheerful, along with a hundred other desirable things, can all become habits, so that we do them without thinking about them. Remember this—most of a man's habits are formed while he is a boy. One of the surest ways in the world for you to provide health for your old age, then, is to build strong health habits while you're a boy.

If you want to keep fit and strong and feel the joy of living, regular bowel habits are of the greatest importance. "Keep your bowels open" is one of the mottoes every PIONEER should accept and carry out. By taking the initial letters of these words, thus "Kybo," you may get a word to remind you of this important function of the body, which may be used without offense. Suggestions about ways to overcome constipation are given in the chapter on "Health and Endurance." Learn to keep clean inside as well as out, if you wish to be your own self.

Clean teeth are very necessary to good health. It takes but a brief time every day to give the teeth all the care they need. They should be cleaned the last thing each night before you go to bed and in the morning before breakfast.

HEALTH HABITS.....Total Credits—150

REQUIRED TEST—Maximum Credits—90

Make at least six of the following daily habits of life:

1. **Fixed hour for rising and retiring, allowing nine hours sleep with windows open.**
2. **Drinking one glass of water on arising.**
3. **Cleansing the teeth.**
4. **Regular exercise.**
5. **Bath twice a week.**

6. Daily bowel movement at regular hour.
7. Evidence of care in personal appearance.
8. Temperance in sweets, sodas, ice cream, etc.

Grade for posture and cleanliness, as follows:

Excellent—30 credits.
Good—20 credits.
Fair—10 credits.

ELECTIVE TESTS—20 credits each up to 60

1. Attend an educational talk or discussion, or read a book on:
 The Value of Good Habits (first year).
 Authoritative Physical Effects of Tobacco (second year).
 Some Modern Facts about Alcoholic Drinks (third year).
2. Sign the following agreement each year—(20 credits each year):
 "I will endeavor to live out the principles of clean speech, clean sports, and clean habits for at least one year."

II. CAMPCRAFT

"Say," said one PIONEER to another, "I'd rather have a pair of wieners cooked on the coals of a campfire, with real roasting ears baked Indian style for dessert, than the best turkey dinner mother ever made." Every boy loves to camp and every boy ought to camp, if for only a brief period each year. Now when you say camping to some boys they at once think of a great wagon-load of all sorts of equipment, a small grocery store, and a guide or two. That is only one sort of camping and not many PIONEERS will have such an opportunity. Another sort is where two or two dozen boys and a *Leader* can go camping with a very simple, often home-made equipment, and even carry food, blankets, and clothing, if necessary. A real camper knows the art of "smoothing it with rough things." Campcraft is in knowing how to make nature supply most of your wants. A camp may be one day or a month in length, that is not so important; but two things are important: Be sure to take with you a lively imagination and a large package of unselfishness. More camps are a failure because these two inexpensive necessities are for-

gotten than for any other reason. With them you can camp on a vacant lot, along a small stream, in a wood-lot, on a mountain, or far in the wilderness, and have a profitable time. Some one has said that "the ideal life for a boy is not in the city, for he should know of animals, rivers, plants, and that great out-of-doors that builds for him a strong foundation for later life." It is for that very reason that the campcraft tests are a part of the PIONEER'S program. If there is a will there is a way, for the will will make a way. If you cannot learn to be a campcrafter one way, do it another. It is a very real and worth-while part of a boy's life.

CAMPCRAFT.....Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Take at least one six-mile hike into the open country, build suitable fire, and cook acceptably meat, potatoes, and cocoa.

ELECTIVE TESTS—25 credits each up to 50

1. Attend an educational talk or discussion, or read a book on:

 How and What to Eat on Hikes (first year).
 Practical Campcraft for Boys (second year).
 Things to Remember in Choosing a Camp Site, or The Benefits of Camping (third year).

2. Sleep in the open air, on sleeping-porch, or under canvas, at least three nights in a given season.

3. Demonstrate how to build a cooking fire, a smudge fire, an all-night fire, and tell the best sorts of wood obtainable for each in your section.

4. Demonstrate fire building with fire drill or rubbing sticks.

5. Describe three poisonous snakes of the United States and give range of each.

6. Tie, name, and give the common use for ten standard knots.

7. Build, or describe with sketches, a sanitary camp latrine and explain two ways of disposing of garbage.

8. Build a shelter, shack, or shanty to protect at least three persons from the weather.

III. TEAM GAMES

Every PIONEER should be a member of a team. There are enough sorts of team games played by boys today so that any fellow can play the game he likes best. In England every boy plays the game instead of just developing a crack team from the whole group, as we have done for so many years in America. "Play the game," ought to be every PIONEER'S slogan. Young children play by themselves better than on a team, but when a boy reaches the PIONEER age he is ready to play on the team. Team play differs from playing alone in many ways. In the first place, a boy must *make* the team. That means constantly endeavoring to become a more efficient player. He must learn to be a good loser as well as a good winner. No team is ever proud of a poor loser. He must learn to sacrifice his own glory for the glory of the team. Playing to the grandstand, to the detriment of the whole team, is a serious offense in good sportsmanship. He must control himself—a team will not tolerate a boy who is constantly "flying off the handle" or "getting sore." Team play is where a boy learns many of his first lessons of citizenship and cooperation.

TEAM GAMES.....Total Credits—150

REQUIRED TEST—Maximum of Credits—75

Show reasonable proficiency in at least two team games, such as baseball, football, soccer, volley ball, hockey, and participate at least eight times in team games, showing self-control, gentlemanly conduct, and good spirit.

ELECTIVE TEST—25 credits each up to 75

1. Write or tell in 200 words: What I Get Out Of Team Games.

2. Write or tell in 200 words: How to Keep Physically Fit.

3. Belong to an athletic team competing for a city or county championship.

4. Give evidence that you have studied at least one of the latest official guides, on either

Baseball, Basket Ball, Volley Ball or Football.

IV. GROUP GAMES

Group games have much the same value to a boy that the team games have; on the other hand, they fill a place that team games cannot fill. They are largely played without equipment and without gymnasium or athletic field. They may also be used indoors or outdoors and played night or day. Besides their undoubted physical value, they also have a social value. Every PIONEER should know group games. They come so handy when a group is together, whether on a hike, or in a camp, or on a vacant lot, the school ground, or even in the school room. The boy who can teach the others a new game is always in demand.

There are always some boys who, for some reason or another, cannot enter into intense team games. Stronger boys should always remember this fact. Group games, then, fill an important place in such boys' lives. Learn to play group games and observe all the rules of a real sportsman, just as you would if you were representing your school or town on a representative team.

GROUP GAMES.....Total Credits—150

REQUIRED TEST—Maximum of Credits—90

Know and play at least ten different group games. (See Chapter XV, this Manual).

ELECTIVE TESTS—30 credits each up to 60

1. Be able to teach at least six group games to boys.
2. Acceptably conduct an evening of group or mass games for your group or some other, using at least eight games.
3. Bring two acceptable new games not already used by your group, and teach them how to play them.
4. Read the whole of Chapter XV on Group Games.

V. AQUATICS

Every PIONEER should know how to swim. Instruction in swimming and life-saving should be a part of every American boy's education; first, from the point of view of safety, and second, because it is an ideal form of physical exercise. A good swimmer is most times a splendid type of boy physically.

Thousands of lives are lost annually by drowning, and at least a goodly proportion of these losses would be prevented if the knowledge of this great art of swimming and life-saving were more generally known. Every PIONEER owes it to himself and to his country to be ready and capable of rendering aid in case of drowning. One never knows when he may be called upon to put his courage and heroism to the supreme test of rescuing another. To save a human life from drowning is one of the greatest acts of service that any boy can perform. Therefore, do not fail to make the most of every opportunity to learn to swim or to improve your strokes. It is also very much easier to learn to swim when you are PIONEER age than at any other time. A few well-directed lessons will most times give you the necessary start. Boys who can swim should feel a responsibility for teaching those who can not.

The aquatic tests are arranged so that you may earn credits from the time you really begin to swim, but do not be content until you have completed the entire test. You can then render invaluable service by aiding in giving the tests to other boys in your own or some other group.

AQUATICS.....Total Credits—150

REQUIRED TEST—Maximum of Credits—50

Be able to dive into the water and swim at least fifteen yards. Demonstrate at least three methods of rescue and release as given on page 146.

ELECTIVE TESTS—20 credits each up to 100

1. Swim on the back 15 yards.
2. Scull on back (using hands only).
3. Tread water half a minute.
4. Swim 40 yards.
5. Plunge for distance of 20 feet.
 Dive from surface and bring up object from bottom in reasonable depth.
6. Teach one boy to swim 10 yards.
7. Demonstrate three methods of rescue and release in the water.

8. Demonstrate Schafer method of resuscitation.
9. Tow person of rescuer's own weight 20 feet.
10. Swim 100 yards using crawl, breast, back, and side overarm stroke.

VI. ATHLETICS

All PIONEERS will, of course, be tremendously interested in the various field and track meets that are annually conducted by various organizations in their locality. Such events provide worth-while activity as well as stimulate many desirable qualities in a growing boy, such as alertness, courage, and self-reliance. In years gone by track and field athletes always competed primarily against another fellow. The new and better way is to challenge every PIONEER to beat his own best previous record and to measure up to an all-round field and track standard, instead of becoming a "stunt artist" in any one event. Bear in mind that PIONEERS are seeking all-round development, not honors. Read all the following paragraphs on track athletics carefully. The grouping, events, and scores will all become perfectly clear to you in that way.

BASIS OF GRADING FOR ATHLETIC EVENTS

The weight classification has been chosen because it is the most simple, conforms to existing efficiency tests, and is most practical for the *Leader*. The following is the weight classification:

Class I.	60 to 80 lbs. inclusive	80 lb. class.
Class II.	80 to 95 lbs. inclusive	95 lb. class.
Class III.	96 to 110 lbs. inclusive	110 lb. class.
Class IV.	111 to 125 lbs. inclusive	125 lb. class.
Class V.	18 years and under Weight unlimited	unlimited class.

In rare instances there are boys who are handicapped by a straight weight classification, for instance, a boy twelve years old weighing 120 lbs. would be outclassed in the 125 lb. class. There are a few boys who are given an undue advantage. A boy seventeen years old weighing 100 lbs. would outclass any boy of fourteen or fifteen in the 110 lb. class. In competition with other groups, the straight weight classification should be followed but in competition within the group, the *Leader*, with the consent of

the group, could make exceptions of these boys and grade them according to the following averages and classifications.

A summary of study of the average weight of 67,987 boys in the United States gives the following results for the varying ages:

12 years— 69.8 lbs.	15 years— 91.4 lbs.
13 years— 75.2 lbs.	16 years—111.9 lbs.
14 years— 82.3 lbs.	

These averages, applied, result in the following age and weight classification which may be used:

Class I.	Boys 12 years, irrespective of weight.
	Boys 13 years, under 81 lbs.
Class II.	Boys 13 years, 81 lbs. and over.
	Boys 14 and 15 years, under 96 lbs.
Class III.	Boys 14 and 15 years, 96 lbs. and over.
	Boys 16 and 17 years, under 111 lbs.
Class IV.	Boys 16 and 17 years, 111 lbs. and over.
Class V.	Boys 18 years, irrespective of weight.

ATHLETICS.....Total Credits—200

ATHLETIC EVENTS SUMMARY

Each event counts a maximum of 20 points
Total, 10 events 200 points

Class I	*Class II*
60 to 80 lbs. inclusive	81 to 95 lbs. inclusive
80 lbs. Class	95 lb. Class
1. One Lap Potato Race	1. One Lap Potato Race
*2. Three Lap Potato Race	*2. Four Lap Potato Race
3. 50 Yard Dash	3. 75 Yard Dash
*4. 75 Yard Dash	*4. 100 Yard Dash
5. Standing Broad Jump	5. Standing Broad Jump
*6. Pull Up—Four Times	*6. Pull Up—Five Times
*7. Running High Jump	*7. Running High Jump
8. Running Broad Jump	8. Running Broad Jump
*9. One Day Hike— Eight Miles	*9. One Day Hike— Ten Miles
*10. Century Hike—100 miles in one year	*10. Century Hike—100 miles in one year
11. Baseball Throw	11. Baseball Throw

The six starred events are required events. Participants may pick four of the remaining five to make ten events.

Class III

96 to 110 lbs. inclusive
110 lb. Class

1. Two Lap Potato Race
*2. Five Lap Potato Race
3. 75 Yard Dash
*4. 100 Yard Dash
5. Standing Broad Jump
*6. Pull Up—Six Times
*7. Running High Jump
8. Running Broad Jump
*9. One Day Hike—Twelve Miles
*10. Century Hike—100 miles in six mos.
11. Baseball Throw for Distance
12. Shot Put

Class IV

111 to 125 lbs. inclusive
125 lb. Class

Two Lap Potato Race
Six Lap Potato Race
100 Yard Dash
220 Yard Dash
Standing Broad Jump
Pull Up—Seven Times
Running High Jump
Running Broad Jump
One Day Hike—Fourteen Miles
Century Hike—100 miles in six mos.
Baseball Throw for Distance
Shot Put

Class V

Weight unlimited
18 years and under
Unlimited Class

1. Three Lap Potato Race
*2. Eight Lap Potato Race
3. 100 Yard Dash
*4. 220 Yard Dash
5. Standing Broad Jump
*6. Pull Up—Eight Times
*7. Running High Jump
8. Running Broad Jump
*9. One Day Hike—Eighteen Miles
*10. Century Hike—100 Miles in 6 Mos.
11. Baseball Throw for Distance
12. Shot Put

The six starred events are required. Participants may pick four of the remaining six to make ten events.

Full scoring tables are given in the chapter on Track and Field Athletics, page 99.

VII. PHYSICAL EXAMINATION

You will remembers that under "Health Education" and also under "Health Habits" we referred to the human body as a wonderfully constructed and perfectly adjusted machine. Automobiles, adding-machines, and fine watches are kept in first-class running order by having experts look them over carefully at stated intervals. Prevention is better than cure. "First a squeak, then a rattle, then a garage bill," is the way it goes with an automobile. It's the same with the human machine. First an ache, then a pain, then a sick spell. Oftentimes, these trained experts, looking over a fine machine, can make suggestions about the way you are using the machine that will save you not only money but time and patience. So it is with a physical examination. We go once every six months to have our teeth examined; why not have our whole physical machine looked over at the same time? In this way many bad tendencies are discovered in time to correct them. Most physical disabilities develop very slowly, so slowly that we are entirely unconscious of them until something breaks. A thorough physical examination once a year would make this impossible. Most doctors prefer to keep people well rather than to doctor them after they are sick.

A very careful yet simple blank has been devised for this examination. These should be carefully studied by your parents and kept from time to time as a record. The concrete suggestions made by the examiner should be given careful consideration by your parents.

PHYSICAL EXAMINATION.....Total Credits—100

REQUIRED TEST

Have a thorough physical examination by a reputable doctor, approved by your Leader, using blank provided for same at end of the book.

Award credits as follows: Fair Physical Condition 50 credits.
Good " " 70 "
A–1 " " 100 "

Note

A boy should be reexamined physically each year, preferably at the time of the annual granting of chart honors. Use blank suggested at the end of the book.

CHAPTER IV

THE DEVOTIONAL TRAINING PROGRAM AND ACTIVITIES

"Jesus advanced . . . in favor with God"—Luke 2:52.

Some young boys no doubt believe that religion is only for Sunday—one day a week provided for all folks, including boys, to be good—but that everybody gets so busy the rest of the week they forget all about religion until it is time to study the Sunday school lesson again on Saturday night.

As they grow older they learn that this is a wrong idea—completely wrong—for they discover that religion is not only what one believes about God and His Son, Jesus Christ, or how one behaves on Sunday, but that it is how one acts at all times, in all places, and under all circumstances, whether there is any one looking or not. A boy has no more religion than he acts out in his daily life, no matter where he goes to Sunday school. They also learn that Christianity, instead of being a lot of hard, difficult things to understand, is simply an ideal way of living represented to us by Jesus Christ. All life is religious. True religion is one of the things no boy can afford to be without, for he can no more build a complete, well-rounded life without it than a contractor can build a brick house without brick. True religion is what makes life sacred and worth while. We would all be wild animals without it.

A white man, traveling through a country where the natives had some years before been cannibals, found one of them studying a little copy of the New Testament. The traveler—an unbeliever in any religion or in a God—sneered at the native and asked why he wasted his time reading such a book, advising the native that it had never done him any good. The islander looked at him in great surprise and replied: "If it never did you any good before, it has today. If it were not for the things we of this island have learned about a different way of living from this Book, we'd have you in a pot cooking for dinner at this very minute."

You would not want to live in a heathen land. It is true religion that has made the sort of life we have in America possible. We must have churches and we must use Sunday as God meant it to be used—a special day on which to get together and study about Him, so that we can live Jesus' way all the week. It would be difficult to find in all modern history the names of any men who really achieved greatness who were not intensely loyal to the Church and its services. From their church life they have gained inspiration for their greatness. Here they enjoyed those spiritual privileges and blessings which were the secret of their power and usefulness.

The visit of Jesus to the temple when He was twelve years of age was the greatest event in His boyhood. It was at this time that He was admitted into the full privileges of membership in the Jewish Church. So may PIONEERS, as they come to that period of life when they are able to choose for themselves, be expected to learn about and respond to the opportunity to follow Jesus in this step also by entering freely into the privileges of their membership in the Christian Church.

Note

If you have had Boy Scout training or have been identified with any similar organization, your Leader will grant you full credit for all the work you have done in that organization that corresponds to the tests required in this Program, whether in regular activities or on special Merit Badges, provided you have taken the same under a registered or competent Leader within a reasonable period.

I. PUBLIC WORSHIP

Everybody worships. In all countries of the world, among all peoples of the world, men worship. When Helen Keller, blind, deaf, and dumb, was told by her teacher about God, she said, "Oh, I knew Him all the time, but I didn't know His name."

So worship is natural to us all and prayer is one of the customs found in all countries amid all people. It is perfectly natural for a little child to pray. A strong man in the fullness of his mature powers also feels his need of God and his dependence upon Him. And the PIONEER certainly needs to come close to God and to

realize that God is his Friend, that God has a plan for his life and is ready to help him to carry out that plan.

And because little children, their bigger brothers and sisters, their mothers and fathers, and everybody else in a community has this same need of God, and this same ability to know and love and serve Him, what is more natural than that they should come together in a common service of worship? So we have erected church buildings. In these prepared places we assemble for worship, and through hymns and prayers, through Bible reading, and inspiring talks and sermons, we are led to feel God very near to us. Probably no other agency can bring Him so close to us or with the same directness as does the church of our choice.

Every PIONEER should early form the habit of attending church worship with as much regularity as possible. You may not always understand all the sermon, but there are always many things that you can understand and appreciate. The quiet hour of just thinking of God is worth while. The music is worth while. It is worth while just to mingle with the Christian folks of your community. It is worth while just to let God come into your life in that quiet, helpful way.

PUBLIC WORSHIP.....Total Credits—200

REQUIRED TEST—Maximum of Credits—150

Attend regular Sunday church worship, participating in service —2 credits for each service attended up to 100 credits.

Volunteer some definite service to your Pastor, involving at least eight hours—50 credits.

ELECTIVE TESTS—25 credits each

1. As an act of worship, aid the church in distributing food, clothes, and so forth to poor at Thanksgiving, Christmas, or other occasions.

2. As an act of worship, deliver church calendars or notices or collection envelopes, involving at least eight hours' service.

3. Memorize

Five standard church hymns, and Scripture as designated by your *Leader*.

II. GOD IN NATURE AND ART

We were sitting around a camp fire one night after a good day's tramp and, because it was an unusually clear night, the stars were very brilliant. We fell to talking about them, and from them, to the God that made them.

"What's God doing now?" asked one boy who had been especially impressed.

"Working, of course," was the reply. "Have you never seen God at work in His world?" God is in every beautiful thing. He tints the flowers and perfumes them. He paints the sunsets. He gives the birds their songs. He is as busy as can be making the world a beautiful place and very often He uses men to help Him, by inspiring them to paint beautiful pictures or compose wonderful music or to write magnificent poetry. The beauty in the world does not just happen. It is the handiwork of God. Every boy should appreciate the beautiful wherever he finds it, whether in nature, music, art, or poetry. These tests are provided to stimulate you to find God in every lovely thing.

NATURE AND ART.....Total Credits—100

NO REQUIRED TEST OFFERED

ELECTIVE TESTS—20 credits each up to 100
Make different choices each year.

1. NATURE

 Attend an educational talk on:

 a. The Making of the Earth.
 b. The Story of the Stars.
 c. The Development of Plant and Animal Life.

2. MUSIC

 a. Identify five standard hymns or pieces of classical music by ear.
 b. Take lessons six months on some musical instrument.
 c. Attend a high grade concert by an orchestra or a choir that will render some famous oratorio.

3. Art

a. Name two kinds of architecture and describe differences.
b. Name five pieces of classic statuary.
c. Visit an art gallery of at least 100 pieces—note the special things that appeal to your higher nature.

4. Poetry

a. Recite one standard poem.
b. Recite Psalm 1:1–6; 23:1–6; 19:1–14; 8:1–8.

III. CHURCH SCHOOL LOYALTY

Every Pioneer, of course, has already determined to play the game, not just a part of it but all of it. However, no boy can really play the game unless he knows the rules. One of the biggest jobs any boy has on hand is just "learning the rules" to the game of life. To this end he goes to public school through the week to study the rules of arithmetic and algebra and science; at other times he goes to the church school to learn the rules of conduct. He learns the basket ball, football, and hockey rules by listening to the coach and the captain. If a boy endeavors to play football without knowing the rules, he is certain to make many bad mistakes that are bound to embarrass him and be costly to the team. If he fails to go to school and never learns the rules of business and commerce, he must remain an office boy all his life because he does not know how to play the game. The Bible is God's Book of Rules. The best "players" for centuries have studied that Book diligently and carefully. The better we know and understand His rules for our lives, the better we are going to live and the happier we are going to be. It is worth while for every boy who is going to make his life count for good, to be a regular attendant and participant in the church school study and activities.

CHURCH SCHOOL LOYALTY.....Total Credits—200

REQUIRED TEST—150 credits

Attend your church school regularly—3 credits for each attendance up to 150 credits.

Attitude toward your class work (study of lesson and your co-operative spirit)—25 credits.

Assume some definite class or church school responsibility, covering a three months' period and requiring four hours' work, to the satisfaction of your Leader (namely, such tasks as serving as class or departmental officer or on a working committee)—25 credits.

ELECTIVE TESTS—25 credits each

1. Secure at least one new member for your church school.
2. Assist in church entertainment, social, or picnic, involving at least three hours' service.
3. Assist in a definite piece of service, to the extent of four hours, for any of the church organizations, such as the setting up of banquet tables, decorations, moving chairs.

IV. KNOWLEDGE OF THE BIBLE

How much do you know of the greatest book in the world? That is a very fair question. When the first divisions of our American Army were ready to sail for France, President Wilson wrote them a brief, pointed letter of suggestions. One of the first things that he suggested in that message was that every soldier should not only take with him, but take time to read and study, the great Guide Book. Bibles into the hundreds of thousands were asked for by our soldiers in every great camp, in order that they might use their spare hours to study its contents. The outstanding successful men, both of our times and times past, have been men who had a working knowledge of the Bible. It has been translated into every language under the sun. It is read and studied and loved by men of every race and color. It is undoubtedly worth your while to take as much definite Bible study as you can get, both in the church school, in your home, at your midweek meeting, at the summer camp, and in other places. Be familiar with the greatest book of all time.

KNOWLEDGE OF THE BIBLE.....Total Credits—100

REQUIRED TEST—Maximum of credits—50

Ability to turn readily to a given chapter and verse—20 credits.

Tell your group who is your favorite Bible hero and tell explicitly why—30 credits.

ELECTIVE TESTS—25 credits each

1. Take a course of study on the Life and Teachings of Jesus.
2. Take a course on Old Testament Heroes.
3. Take a course on Early Christian Leaders.
4. Write in your own words a designated portion of the Sermon on the Mount.

V. STORY OF CHRISTIANITY

Christianity is a way of living. The Muhammadans have a way of living, savages have a way of living, and heathen nations have a way of living. Christianity is the way Jesus lived, and the story of how the world has gradually accepted His way of living is one of tremendous interest.

He established the Church while He was here on earth to teach folks this way of living. The story of Christianity tells of how Jesus' way of living has gradually changed the whole world. Paul was the first great missionary that went into foreign lands to tell other people than the Israelites of the advantages of living Jesus' way. The story of his adventures alone will thrill any red-blooded boy. From those journeys, churches sprang up by the score and spread to all parts of the known world, resulting in schools, hospitals, and the spreading broadcast of the good news.

So on through the centuries Christian living has become more and more widely accepted, until today there are hundreds of millions of Christians and whole nations are being called Christian nations, because they are endeavoring to live out in everyday relationships the teachings of Jesus. Savages have become civilized. Slums have been cleaned up. Disease and ignorance have been banished! It is a marvelous story that every boy should know.

This Program provides a series of studies that will give every boy who uses it a very much better idea of just what Christianity really has accomplished and is accomplishing in the world.

STORY OF CHRISTIANITY.....Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Tell your group in story form:

Some specified chapter out of the big story of Christianity and tell why you chose that particular part or

Tell your group what the coming of Christianity has meant to some special country such as: Korea, China, India, Africa. Be explicit.

ELECTIVE TESTS—25 credits each

1. Take a course of study on Christian Heroes.
2. Read the life of some outstanding leader in your particular branch of the Church.
3. Attend a stereopticon talk on The General Story of Christianity.

VI. MY CHURCH AND I

Would you care to live in a community where there were no churches at all? Would you want to live in a community where churches were forbidden? Certainly you would not. We all recognize that the home has a place in every community. Homes are built and protected and encouraged because they fill a very definite purpose that no other place can fill. The same is true of our schools. They are provided at tremendous expense because they are essential to the welfare of the nation. The Christian Church, too, has a very definite purpose. Every growing boy should understand clearly what that purpose is. If he once comes to understand clearly just what the work of the Church is in the world, he will be eager and anxious to associate himself with others to get that work done. This Program provides that every PIONEER shall listen to at least four talks during the year on the work and purpose of the Church. These are provided to make you a more intelligent Christian. Don't miss a single one of them.

MY CHURCH AND I.....Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Take a course of study on the following topics (or attend a series of talks by your Pastor or some one delegated by Leader which will include the following):

a. Why Have a Church?
b. The Place of the Church in a Boy's Life.

c. A Boy's Right Attitude to the Church.
d. What Being a Christian Really Means.

ELECTIVE TESTS—25 credits each

1. Give five reasons, before your group, why a boy should become a church member.

2. Attend the regular Pastor's class through one series of talks.

3. Contribute regularly to the Church and to benevolences.

4. Do some specific piece of service for your church, such as suggested by Pastor or *Leader*.

VII. DAILY DEVOTIONS

Public Worship, Church School Loyalty, and the other portions of the Devotional Training Program are tremendously important but not enough. The Indian started each day by turning to the rising sun and thanking the Great Spirit for a new day with health and strength. Study the life of Jesus and you will soon discover that He had His daily devotions. He went "apart, alone to pray." He not only started the day right by being thankful for a night of rest, but He was anxious to know what His Father wanted Him to do that day and He felt the need of strength and courage with which to meet that day's problems. Even boys have problems in their lives that need to be met in just that spirit.

General Gordon's almost magical influence arose from his constant conference with his Heavenly Father. When he was in the Soudan he never hesitated to place outside his tent the white handkerchief which meant, as all men know, that he was at prayer, and that during that sacred hour when he was alone with God, he must not be disturbed. We need God's help to meet temptations; every day we have work to do for our Heavenly Father; every day we need to be true, loyal, kind, helpful. and we shall find strength for all of this if we will honestly and earnestly pray for it. We don't try to lay up on Sunday such a supply of food that we can do without our meals for all the rest of the week. We eat our meals every day, because we need

strength every day. So every day we need to pray, for every day we need God's help.

And as through prayer we talk to God, so through the Bible God talks very directly to us. It is a habit that will be of immense help to us, to read a chapter from the "Guide Book" every day. If you find it possible to do this in the early morning before you leave your room, you will find it a splendid preparation for the day. You see, there is likely to be very little opportunity for you to be alone during the day, except in the morning when you first get up and at night when you are going to bed, so you will do well to use both of these times for a few moments of earnest prayer. Don't suppose you are too busy to indulge in such helpful things. Great business and professional men the world over, whose lives are crowded with great problems, take time to talk with the Guide and study the Rules every day.

DAILY DEVOTIONS.....Total Credits—200

REQUIRED TESTS—Maximum of Credits—150

Give time regularly to daily Bible reading and prayer. (Any standard book of Bible stories may be used in place of the Bible if preferred, or the use of any religious book prescribed by your Leader, or participation in regular family worship, will be acceptable.)

ELECTIVE TESTS—50 credits each

1. Attend an inspirational talk on:
 The Value of Daily Devotions (first year).
 What Is Worship? (first year).
2. Worship, a Universal Need (second year).
3. Christ as a Boy's Comrade (third year).

CHAPTER V

THE SERVICE TRAINING PROGRAM AND ACTIVITIES

"Jesus advanced . . . in favor with . . . men"—Luke 2:52.

The War has turned every city and hamlet in America into a sort of big family. We have learned how to do things together. Instead of a lot of teams playing at the same game, we have become much more nearly one large team. We have developed a local pride in the things we have accomplished together, too. Time after time we have gone "over the top" with certain big responsibilities, with the boys doing their full part each time. We have had no patience at all with any boy who was not wholeheartedly American and willing to do, to the best of his ability, the thing that would be best for all the community.

In all good families every member is always very much interested in all the things that affect every other member. Brothers stand up for each other to see that they get a square deal; or they willingly help each other on big tasks, making possible for each other special worth-while opportunities. There are very many older brothers who work so that their younger brothers may go to school, or who help by their earning to send a sister to college or to provide music lessons. That is fine. When men who have prospered give large sums of money to found schools and colleges and hospitals for other members of society, that shows that they are broad-minded, unselfish citizens, and that they have taken the whole community into their "family."

A big brother would not be willing to have his sister or mother subjected to conditions that are not good or to labor that is too heavy or too dangerous. Just so, as a boy grows older, if he is a real boy he becomes determined that he will not tolerate these bad conditions in regard to any one of the women and children in not only his city but in his state or nation, and he uses his vote as a full-fledged citizen to that end. All boy activity—school,

athletics, church—is a preparation to make of him an intelligent, broad-minded, sympathetic citizen.

Every boy is sociable. He likes to be with other boys. He becomes loyal to his comrades and his gang and that is normal. If the gang is a worth-while gang, it is always loyal to the town, the state, and the nation. Every PIONEER has begun to be a citizen and must expect to share increasingly the community responsibilities.

It will be remembered that the Jewish custom provided that at twelve years of age every boy must fulfil all the ceremonies which were required of all responsible males. The incident which tells us (Luke 2:40–52) of Jesus' going up to the temple with His parents, was at the time when He was twelve years of age and thus had become a "son of the law." In the verse which closes the story of this important visit to Jerusalem we learn that "Jesus advanced in favor with men," that is, His relations with all the people with whom He had to do were right and acceptable. We are told that Jesus in His years at Nazareth, lived in obedience to His parents. We see how deep-rooted was His love of home and parents, when, even in the agony of His dying moments He thinks of His mother and directs the apostle, John, to take her to his home.

Jesus learned the trade of carpentering, and thus was fitted to care for Himself and those dependent upon Him. Every boy who wants to be socially "fit" must see to it that he prepares himself by his schooling and other experience to earn a living for himself and his family.

Jesus went about doing good. He was always interested in others and ready to help them. He was the kind of person who attracts and interests people. They thronged around Him during the years of His ministry. They wanted Him to be present at the wedding feast at Cana and on many other festive social occasions. If we desire to follow Him completely we must develop the social side of our natures also, and the tests in Home Service, "Help the Other Fellow," and the other sections of this portion of the Program are intended to help a PIONEER develop this fourth side of his nature, so that he, too, may increase in favor with his fellowmen.

Note

If you have had Boy Scout training or have been identified with any similar organization, your Leader will grant you full credit for all the work you have done in that organization that corresponds to the tests required in this Program, whether in regular activities or on special Merit Badges, provided you have taken same under a registered or competent Leader within a reasonable period.

I. HOME SERVICE

No heritage which a boy can have is worthy to be compared with the knowledge of having done all that he could to make his father and mother happy and proud during their lifetime. There is a story told of a young chap of fourteen, who returning one evening from the hay-field, where he had been at work with the men since daybreak, found his father waiting for him with a request that he go at once to town on a very important piece of business for him. Any boy who has lived or visited on a farm and who knows what a day's work from "sun-up to sun-down" means in haying time, will understand just how that boy felt. He was tired and dusty and hungry and it was two big miles to town, but the boy and his father had always been pals and the tired boy knew from his father's face that some unusual situation had arisen which made it absolutely necessary for someone to go. "Of course I'll go, Father," said the weary lad.

"Thank you, Jim," replied the father, a bright smile of relief brightening up his face. "I was going myself, but somehow I'm a bit excited tonight and do not feel very strong."

They walked to the gate together, arm in arm. "Thank you, my son," said the father earnestly in parting, "you've always been a good boy to me, Jim."

When the boy returned from the village, he found the home place alive with excitement. His father, upon returning up the path, had dropped dead at the gate. His last words have always been a great comfort to that boy: "You've always been a good boy to me, Jim."

There was once a man, the father of four boys and four girls, who was always kind and gentle with his children. He very seldom lost his temper with them except when one of the boys

would treat his sister in a way that was not respectful and courteous. The father used to say: "If you cannot be a gentleman with your own sisters, you are quite certain not to be when you meet the sisters of others. I want you to elevate your sisters in this home so that young men and other persons who come here will see that, in your opinion, your sisters are the best in the world." Another wise man said, "Be polite—perhaps your family won't mind if you practice on them."

If, as a PIONEER, you believe this program of activities is worth while for a boy, one of the very best ways you can prove it is in *your* home relationships. Some one has said: "Tell me what the cat and the dog and little mouse in the corner of Tom's house say about him, and I'll tell you just what sort of a boy he is."

HOME SERVICE.....Total Credits—200

REQUIRED TEST—Maximum of Credits—100

Give evidence from your parent that your home discipline and relationships are satisfactory, using report card to be provided by your Leader.

ELECTIVE TESTS—25 credits each up to 100

1. Accept responsibilities for regular home duties, such as, chores, caring for yard, machine, chickens, garden, animals, furnace, etc., task to be specified by parent and to represent at least four hours' service a week.

2. Provide some useful article for the home, either of your own construction or purchased with money you have earned, article to have a value of at least two dollars.

3. Clean the grounds around the house of all unsightly weeds and rubbish and keep it clean for a period of six months.

4. Remember your mother with a letter or flowers on Mother's Day or attend a Father and Son Banquet.

5. Assist parents ten hours with younger children, supervising play, taking walks, or reading aloud.

6. Improve the home in some way growing out of your own suggestion; such as an easier way to handle routine or decorate a room or build a shelf, furniture, ice-box drain, wood-box, or flower-box.

7. Keep your own room or shop clean and in order for a six months' period, or its equivalent.

II. THE OTHER FELLOW

"In the early days of Ohio a man who was considered a little strange in the head and who seemed to have had no particular home, spent his time in wandering through the wilds of that new country, scattering apple-seeds. Sometimes he would sleep in a hollow log or tree and doubtless he often wandered about without food or shelter. But he had one object and that was to plant apple seed for the good of others until the people named him 'Apple-seed Johnny' but future generations enjoyed the fruit of his labor of love."

"A certain tallow candle once lay in a drawer when its owner took it and began climbing a long, winding stair up into a tower. 'Where are you taking me?' cried the candle complainingly. 'I am going to show big ships their way over the sea with you,' answered the owner. 'Why, sir, no ship could possibly see my little light,' said the taper. 'Leave that to me,' added the owner as he lighted the big lantern and then blew the taper out."

We can never tell what the result of our little services to the other fellow is going to be. On an old gravestone were cut these words: "He made his corner brighter." Of the Great Master they wrote this simple fact: "He went about doing good." Every PIONEER should be alive to every chance to serve the other fellow.

THE OTHER FELLOW.....Total Credits—150

REQUIRED TEST—Maximum of Credits—75

Render some community service suggested by your Leader and make a definite sacrifice in time, money, or labor for someone more needy than yourself.

ELECTIVE TESTS—25 credits each up to 75

1. Report broken culverts, bridges, or dangerous road conditions to proper authority, and remove nails, glass, etc., from public thoroughfares.

2. Help with other boys of neighborhood in assisting without charge, to harvest the crop or do needed work of sick or disabled neighbor.

3. Contribute at least three dollars, which you have earned during the year, to some worthy cause identified with work for boys.

4. Know the exact location of:

 a. Nearest fire alarm to your home.
 b. Nearest fire plug to your home.
 c. Nearest doctor to your home.
 d. The local hospital, telephone office, telegraph office, and police station.

5. Assist in keeping at least one-quarter mile of public road in shape, or in some equally suitable service for your community.

6. Take active part in a city-wide Clean-up Campaign or some equally suitable service for your community.

7. Report to proper authorities undue abuse or neglect of children or animals.

III. THRIFT

Theodore Roosevelt has said: "The habit of saving money, while it stiffens the will, also brightens one's energy. If you would be sure that you are beginning right, begin to save."

Marshall Field, of Chicago, had a recipe for success. It was this: "If you would succeed in business, always spend a little less than you earn. No matter how small your earnings, you should master this art."

Show me a thrifty boy and I will show you a man who has mastered one of the most difficult parts of success. To be thrifty does not mean that you are to be stingy. A miser is not necessarily thrifty. To be thrifty one must spend less than he earns to be sure, but it means much more. It means that we shall make the most of our abilities to earn and that we shall be spurred on to earn more so that we can give more. But thrift means more than money. It is quite as important to be thrifty with time as with money. Make every day pay by seeing some worth-while things accomplished.

To save your minutes and put them to good use is as important as to save your pennies and invest them well. Both go hand in hand. Every boy should start a personal account by keeping track of both his time and his money. If half the time that is

wasted could be turned to good account and half the money saved that is squandered by thoughtlessness and lack of system, there would be both time and money for every good cause. Be thrifty—get the habit. It will take you a long way toward success. Paupers and ne'er-do-wells save neither one.

THRIFT.....Total Credits—150

REQUIRED TEST—Maximum of Credits—75

Show that each year you are earning, saving, and giving systematically, and that you have occasion to do certain necessary spending under wise direction.

ELECTIVE TESTS—25 credits

1. Contribute regularly a definite amount to some good cause from funds you have earned.

2. Show a bank balance of at least ten dollars, all of which you have earned.

3. Show that you have invested at least ten dollars of your own earnings in some productive enterprise, such as, garden, poultry, or rabbits.

IV. OBSERVING VOCATIONS

Hamilton Mabie says that men fail, as a rule, because they will not pay the price of the thing they want. They are not willing to work hard enough, to prepare thoroughly enough, or to put themselves heartily into what they are doing. "Happy is the man who has found his work in the world." Choosing what you are going to be is a very difficult thing, and yet it is one of the very most important matters that ever come to a boy to be settled. No boy should ever just happen to be a lawyer or doctor or minister. Your final choice should be the result of much study and reading and wide observation. The world's work must be done. There is an enormous quantity of it and much of it is common, often uninteresting, detail. It isn't all adventure or excitement, or out where the world can see and applaud. Every real boy wants to be the sort of a man that can carry his share of the load. It is very important that each man work at the thing in which he will be happy and contented and at the same

time at the sort of thing in which he can produce most for the world and render the greatest service.

How can a boy get all of this information? There are many ways: by constantly keeping "eye and ear gate" open, by reading good books, by asking questions every time you have a chance of men in the different vocations, by listening to vocational talks, by visiting factories, plants, and mills of various sorts. Find out as much as you can of as many lines of effort as possible and then as you grow older you will begin to eliminate the ones in which you are not interested. Don't choose finally too soon. Gather the facts first. The following tests are offered to help you get such vocational information as you will need.

OBSERVING VOCATIONS.....Total Credits—100

REQUIRED TEST—Maximum of Credits—50

Investigate ten vocations common to your locality and tell your group which two interest you most and why.

ELECTIVE TESTS—25 credits each up to 50

1. Attend a practical talk or discussion, or read a book on:
 The World as a Work Shop (first year).
 Testing the Success of a Man's Life Work (second year).
 Drifting or Rowing into a Life Work (third year).

2. Carry through to completion to the satisfaction of the *Leader* any one of the projects promoted by the Government through its Agricultural Club movement.

3. Make a list of ten Americans who you think made a success of their vocations, and tell your group why.

4. Make a list of ten professions and ten trades and check the one in each list in which you think you could succeed, also the ones that interest you most. Give the reasons for your choice.

V. CITIZENSHIP

It is a great privilege for any boy to be an American. All true Americans are proud of their nation. When war clouds threaten or disaster of any kind comes to any part of a great nation, citi-

zens in the unaffected parts generously and with free will share what they have—yes, as we have just seen in the World War—give all that they have, even their lives, for their beloved homeland. A nation is nothing but a large family. Citizenship is the right to help to determine the policies and laws of the family. When a man becomes a citizen, he also becomes a partner. He assumes definite responsibilities. As a member of the family he has certain obligations to perform. If all citizens are good citizens and do their share, the nation becomes great and continually makes possible more and more desirable things for its citizens. If its citizens are careless, unreliable, selfish, and uninterested, it soon becomes a weak nation.

One of the very first things a good citizen must learn is loyalty. Only as we are loyal to each other, to our city, state, and nation, and to ourselves, can we become good citizens. A traitor is the most despicable thing in all the world. Boys first learn loyalty to their gang, then to their team, then to their school, until they come into a real appreciation of citizenship.

The following tests are offered as a check-up on just what sort of a citizen you are.

CITIZENSHIP.....Total Credits—150

REQUIRED TEST—Maximum of Credits—75

Give the origin and history of the American flag and explain the respect that is due it under different circumstances.

ELECTIVE TESTS—25 credits each up to 75

1. Name four national holidays, fly the American flag on all four days, and tell the true significance of each.
2. Recite "America" and "The Star-Spangled Banner" (three verses).
3. Know the principal features of the naturalization laws of the United States.
4. Name ten leading citizens of your country and tell why you consider them so.
5. Name the principal officers of your city government and tell their major duties.
6. Name the principal officers of your county and tell their major duties.

7. Give the history of the Constitution of the United States, and recite the preamble.

8. Attend an educational talk or discussion, or read a book on:

A State's Duty to Its Citizens (first year).
A Citizen's Duty to His State (second year).
American Citizenship (third year).

VI. WORLD BROTHERHOOD

The world is becoming more and more a brotherhood. The telephone, the wireless, aviation, great trains, steamships, as well as the world-wide trading in all sorts of raw material, have resulted in all the world's being drawn closer together. In 1859 it took six months to get from Chicago to California by ox-train; today we go by fast express in three days. It was not long ago that a trip around the world consumed a year of time. Now we send a wireless message in nine minutes.

Missionaries and doctors and manufacturers and explorers have opened up every country in the world. Even the cannibal islands are fast becoming civilized and are accepting Christianity.

A foreigner used to be an odd sight and a Chinaman with his "pigtail" and blue blouse was the cause for a great deal of excitement, but today we can find thousands of foreigners from every land under the sun—many of them often living and working in our very own neighborhood—and we are fast learning that after all we are very much alike. We eat the same food, breathe the same air, and believe in the same Great Father God. And as we are coming to know each other better, we are coming to understand and care more for each other. More than twenty kinds of soldiers fought side by side under the Allies' banner in the World War—black and white, brown, red, and yellow; men from Africa and England and South America and India, from China and Portugal, from Japan and Russia, Belgium and France—all fighting for the same great cause of freedom and right. The world is becoming a brotherhood and the next five years will see wonderful things happen.

These tests are offered, so that you may better understand what is going on about you. The War has made you a world citizen.

WORLD BROTHERHOOD.....Total Credits—100

REQUIRED TEST—Maximum of Credits—75

Name at least six of the various races that are now very common in America and tell the group some of the splendid characteristics of each race named—50 credits.

Suggest two ways in which any boy can help promote a better feeling of brotherhood—25 credits.

ELECTIVE TESTS—25 credits each

1. Take a course of study in your church school or elsewhere covering home and foreign missions.
2. Contribute regularly to the missionary enterprise from your own earnings.
3. Be a party to providing food for some needy family.
4. Be a party to educating some boy in a mission school.
5. Follow up a definite piece of missionary work as directed by your *Leader*.

VII. TRAINING FOR SERVICE

The other day a policeman arrested a suspicious-looking lame old man. The policeman had noticed the old fellow on numerous occasions picking up something from the street and putting it in his pocket. "What have you in your pocket?" demanded the policeman.

"Why, just some bits of glass," replied the old man, much frightened. "I thought the glass might cut some young chap's feet. I always do it. I've been a cripple all my life because some one carelessly threw a bottle in the street."

A tiny service, to be sure, but a very important one which taught the old man to be constantly on the lookout for something he might do for the other fellow.

Even a horse can be trained to do service. Kosciusko, the famous Polish patriot and general, was very benevolent. Sending a messenger on a hurried errand upon a certain occasion, he bade him ride his own horse. But the man was long gone; returning, he explained that his delay was all due to the patriot's horse, for the animal had insisted on stopping at every poor hovel and with every beggar by the way, as if to give alms to the needy.

Our modern life is only made possible by the millions of bits of service that are rendered daily. Every boy should train himself to be of service to others and the community. There are so many ways. The following tests are provided, so that every PIONEER may know how to do things for others.

TRAINING FOR SERVICE.....Total Credits—150

REQUIRED TEST—Maximum of Credits—75

Attend at least five meetings of your group when a Training for Service activity is conducted, such as, First Aid, Safety First, or Leader's Work.

ELECTIVE TESTS—25 credits each up to 75

1. Name four kinds of public service that are applicable to your community, including two in which boys can participate.
2. Take part in one such kind of service.
3. Be elected an officer of your class or club or captain of your team or chairman of some service committee.
4. Show how to make emergency stretchers, splints, and how to bandage head, ankle, or hand satisfactorily.
5. Tell what to do for horses in harness that fall on the street.
6. Tell in writing at least six principles of Safety First.

CHAPTER VI

THE SERVICE RECOGNITIONS

Service is the very heart of our Program. It is the keystone in the arch of worth-while living. Every PIONEER should form the habit of unselfish service to others. A boy may be unusually bright mentally; may have a splendid physical development; may attend public worship, church school, and all those things; may even be considered thrifty and broad-minded, and yet not be intelligently interested in serving others. With this in mind, and with the firm conviction that a very large percentage of boys may easily be led into forming service habits, the Service Recognitions are given a very important place in this Program.

Service tasks group themselves pretty well into six groups: service rendered to individuals (*Personal Service*), service rendered to the home and the home folks (*Home Service*), service rendered to the church and its organizations (*Church Service*), service rendered to the school or place of employment (*School or Employment Service*), service rendered to general groups or to the municipality (*Community Service*), service rendered to one's personal group or club or class (*Group Service*). A great many service tasks, practical for all sorts of boys, are here classified under each heading. In some cases it may be necessary for your *Leader* to arrange even more choices, in order to meet the requirements of your particular locality. If this should be the case, consult him, and together you can work out satisfactory substitutes.

For each one of these rather clearly defined groups of service a *Service Recognition* numeral is offered. (See *Insignia*). This recognition should be worn in the vacant square provided in the very center of your insignia, but must not be worn until the requirements of at least one of the types of service have been fully met. You should clearly understand that this addition to your insignia is *not* a reward *for* service rendered, but merely a recognition *of* service rendered. If you are not vitally interested in rendering service, you must wear a blank

square at the heart of your emblem. The numeral worn indicates the total number of types of service rendered. For instance, if you have rendered all the required service under the head of *Home Service* and *Service to the Group* you are entitled to wear the numeral 2. If you should render all the required service suggested under all the headings, you would be entitled to wear the numeral 6.

In the case of group insignia, the numerals used will be the sum total of all the individual *Service Recognition* numerals of all the members *of your group.* These might total twenty-one or seventy-five, according to the size of your group, and the emphasis that you place on service.

1. Personal Service

(Choice, two out of three tests)

Give satisfactory evidence that you have

a. Rendered ten hours of personal service to sick, lame, blind, or to small children not in your own family, without receiving pay for same.

b. Rendered acknowledged personal service in accident, fire, wreck, runaway, or panic.

c. Returned lost article to rightful owner,

or

Personally helped auto driver, teamster, or pedestrian in any sort of trouble on the road, street, or in the country.

2. Home Service

(Choice, two out of three tests)

Give satisfactory evidence that you have

a. Rendered ten hours of special Home Service in putting in coal or wood, picking fruit, canning fruit or vegetables, house-cleaning, painting, or remodeling other than prescribed by regular tests, without pay.

b. Cared for younger brothers or sisters eighteen hours during absence or sickness of parents, other than prescribed by regular tests,

or

Aided in the support of the home from your own earnings (spirit of the test to be honestly observed).

c. Kept your own room or shop clean and in order for a six months' period.

3. Church Service

(Choice, two out of three tests)

Give satisfactory evidence that you have

a. Been a regular contributor to the support of your church or its equivalent, to the satisfaction of your *Leader*.

b. Assisted in church entertainment, social, or picnic involving fifteen hours' service,

or

Delivered church calendars or notices or collection envelopes, involving fifteen hours' service.

c. Acted as librarian, secretary's assistant, usher, for period of six months, involving at least fifteen hours of service (avoid accepting service that will make group instruction impossible),

or

Beautified church building by planting trees, shrubs, vines, or flowers, involving at least fifteen hours of service,

or

Accomplished special piece of service for the church as prescribed by your *Leader* or Pastor or church official, involving at least fifteen hours of service.

4. School or Employment Service

(Choice, two out of three tests)

Give satisfactory evidence that you have

a. Done special task, not included in your regular work for your school or place of employment, such as, aid new pupil or employe, represent school or firm in entertainment or captain athletic team, etc.

b. Won special recognition for work unusually well done at school or for place of employment (application left to *Leader*).

c. Made three constructive suggestions for the betterment of school or plant, either in favor of other scholars or employes or for general efficiency of school, office, or plant, at least one of these to be accepted and acted upon.

5. Community Service

(Choice, two out of three tests)

Give satisfactory evidence that you have

a. Taken active part in the boy leadership of some community-wide campaign—such as, clean-up, fly extermination, community gardens.

b. Ushered at some public gathering; helped patrol streets on parade days; played in band or orchestra on public occasions, or equivalent,

or

Actively helped protect and provide for birds or have become Government Bird Observer,

or

Reported at least two instances of dirty lots or alleys, garbage cans, broken culverts, damaged bridges, or washed-out highways to proper authorities.

c. Done special piece of service not before reported for your community, sanctioned by your *Leader*, such as, Junior Police, turning in fire alarms, cutting weeds on vacant lots or along roads.

6. Service to the Group

(Choice, two out of three tests)

Give satisfactory evidence that you have

a. Been elected to office for six months, such as class or group office, without electioneering on your part.

b. Captained or managed a group team in athletics or swimming.

c. Secured five new members for your group,

or

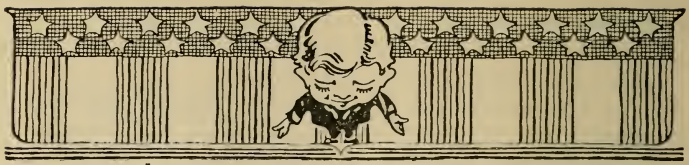
Provided equipment representing sacrifice—books, furniture, rugs, pictures—for club or class room,

or

Made possible some special treat for the group (eats or drinks not to count), such as a trip, special guest, uniforms.

7. Saving Human Life (Highest Recognition of the Program).

Any Pioneer who saves a human life from water, fire, or accident may be awarded the Life Saving *Recognition*. Certain required evidence must be offered to secure this honor.



CHAPTER VII

AMERICANS ALL

THEODORE ROOSEVELT

Every boy has an ideal, but no man of our country ever lived who so completely came up to the ideals of the American boy as Theodore Roosevelt. Why? Because he did so many things well and was so thoroughly American. The moving picture has given the American boy an ideal in "The Fighting Roosevelt." He had to fight in order to reach physical, intellectual, devotional, and service standards. As a boy he was puny and sickly; but with indómitable determination he transformed his feeble body not merely into a strong one, but into one of the strongest. This physical feebleness caused in him nervousness and self-distrust. He set himself to change his character, as he changed his body, and to make himself a man of self-confidence and courage. When he entered public life he did not possess the gifts of a debater or public speaker, but he determined to overcome these handicaps. As a result, few men have been able to influence an audience with such appealing power as Roosevelt.

He came of one of the oldest Dutch-American families. In his veins were mingled Irish, Scotch, and Huguenot blood. His father was a man who did things. In the Civil War he organized a number of New York regiments and was one of the leaders in organizing the Sanitary Commission and other work for the soldiers. His father's spirit of service had a great influence upon his son. Theodore Roosevelt was born in New York City October 27, 1858. He was graduated from Harvard in 1880. He then took up the study of law, but did not continue it long. He entered politics and at the age of twenty-three was elected to the New York State Legislature. Within a year he was the

Republican leader in the lower house, because of his fighting qualities. He thus plunged at once as a young man into that field of activity which he never afterwards forsook—politics. In accepting a position of public trust, he was never governed by the money or power which it afforded. The determining factor was, what are the opportunities for rendering genuine service?

When poor health sent him West to throw in his lot with the rough and ready cowboys, the ranchers were disposed at first to laugh at the "four-eyed dude," but they changed their opinion when they found that no work was too hard for him, no hardship too severe, no peril too great. The story is told of a round-up in which Roosevelt participated. There was a cow with a new-born calf. The cowboys were not going to bother about the calf, but drive its mother to the round-up. Out of the bigness of his heart, he picked up the calf when it got stuck in the mud, put it in front of his saddle, and rode off, driving its mother ahead of him with the rest of the cattle.

One of the great qualities of Roosevelt was his courage. Once when he arrived in the Rocky Mountains to hunt grizzly bears, the toughs of the regions declared their intention of "doing him up." One of them went so far as to send a message to Roosevelt, to the effect that if he proceeded to track grizzlies there would be shooting. Roosevelt inquired where this person with the propensity for shooting lived and rode at once into his camp. The man, however, had forgotten by this time why he wanted to shoot. This incident put an end to treating Roosevelt as a tenderfoot. Before the hunting campaign was ended, he had won the respect of all, and, when the time came, many of those who had been ready to "do him up" as a tenderfoot were among the most eager to follow him as "Rough Riders" into the jungles of Cuba for service to their country. As Police and Civil Service Commissioner for New York City, as Governor of New York, and as President of the United States, he was absolutely fearless.

No man ever lived who loved hard work more than Roosevelt. But he loved to play hard as well. His love of work and play led him into many fields of activities and scientific investigation. He won a high place as a hunter, sportsman, explorer, historian, essayist, scientist, critic, editor, reformer, and statesman. When he wished to rest from political and governmental responsibilities,

he would go on a hunting trip into the wilds of America or even take an extended tour of exploration to Africa or South America. Theodore Roosevelt showed in what he did, said, and lived, that a real American is a man who works and serves. He has taught the American boy how to think and act for himself and yet serve others.

In his book entitled "The Great Adventure," he tells the American boy some of the secrets of his life. "The boy can best become a good man by being a good boy—not a goody-goody boy, but just a plain good boy. The best boys I know—the best men I know—are good at their studies or their business, fearless and stalwart, hated and feared by all that is wicked and depraved, incapable of submitting to wrong-doing and equally incapable of being aught but tender to the weak and helpless. He cannot do good work, if he is not strong and does not try with his whole heart and soul to count in any contest; and his strength will be a curse to himself and to everyone else, if he does not have thorough command over himself and over his own evil passions, and if he does not use his strength on the side of decency, justice, and fair dealing. In short, in life, as in a football game, the principle to follow is: 'Hit the line hard; don't foul and don't shirk, but hit the line hard!'"

One of the greatest tributes paid to Roosevelt was given by the pastor of the church which he joined as a boy: "I like to think of Mr. Roosevelt as a religious man, a man who made room in his life for God. He was a Christian gentleman. He was a member of the church and always attended church services. He accepted the Bible and made room in his busy life for Jesus Christ."

JACOB RIIS

Denmark was the birthplace of Jacob Riis. The life of this boy was marked by bold decisions and impulsive deeds, revealing the fighting spirit of his Viking ancestors. While a carpenter's apprentice in his middle teens, he fell in love and, as he never did things by halves, fell in completely. But the boy apparently threw his last chance away, when, as chairman of a social affair, he ordered the young lady's father from the floor. Soon after this event he left for Copenhagen, where he spent four years

completing his apprenticeship. The problems of city life were to be hereafter his chief concern, although he was destined to probe them at the cost of much suffering. At nineteen he returned to his native town determined to know his fate. The young lady and her father were cold, but the mother secretly gave him a gold locket in which was a wisp of one of Elizabeth's curls.

With the locket and her picture, his most treasured possessions, young Riis sailed for America, landing in New York early in 1870. He had two immediate resources—some knowledge of English and a capital of forty dollars. His money soon disappeared, especially as he spent one-half of it for a big navy revolver. He must have presented a funny sight on lower Broadway, but New Yorkers who were un-American enough to ridicule and the friendly policeman who advised disarmament little suspected that within a generation this immigrant boy would become a great constructive force in the affairs of the city.

The years that followed tested every physical and moral quality. Penniless, friendless, and wet to the skin, a stormy night found him down on the dock. Months had passed without word from Elizabeth. Three thousand miles of water lay between them, and the dark river ran below. "Would any one know—would any one care if he did know?" and he edged a little nearer to the perilous edge. A movement at his side revealed the shivering form of a yellow dog, seeking a friend. Young Riis always had a great love for animals. Together the friendly outcasts fought their way against the storm to the lodging house connected with the Church Street Police Station. That night Jacob was robbed of his treasured locket. He made a complaint to the Sergeant, who proceeded to kick the boy and his four-footed friend out into the night and the rain. The son of the Vikings put up a furious but vain resistance. The dog rushed to his aid but was killed by the burly Sergeant, who dashed him against the stone steps of the Police Station. That night planted the seeds of a new purpose in the heart of Jacob Riis—seeds which bore their fruit years later when by his efforts the police lodging houses, breeding-places of vice and crime, were wiped out.

Another critical period when despair threatened came after an unsuccessful attempt to sell a book—appropriately called "Hard

Times." Jacob and his faithful friend—this time a great Newfoundland dog—were sitting dejectedly on the steps of Cooper Institute where they were found by a former acquaintance. Through his interest, the young book agent was helped to find a position as a reporter.

Out of his lodging-house experiences and his failure as a book agent came two great calls in life—social reform and newspaper work. Nevertheless, more than that occurred the day when Jacob Riis became a cub reporter. Later he wrote: "What had happened had stirred me profoundly. For the second time I saw a Hand held out to save me from wreck just when it seemed inevitable; and I knew it for His hand to whose will I was just beginning to bow. . . . In the shadow of Grace Church I bowed my head against the granite wall of the great tower and prayed for strength to do the work I had so long and arduously sought and which had now come to me." To Jacob Riis religion was a reality. In discussing prayer as a help in his work, he said: "If I were to find that I could not do that (pray) I should decline to go into the fight, or if I had to, I should feel that I were to be justly beaten."

Energy and character brought results to the young reporter. A daring decision made him the owner of a small newspaper. Then came the never-despaired-of letter from Elizabeth, in which she confessed that she loved him. A fortunate sale of the paper furnished the funds for the trip to Denmark, to claim his bride and bring her to America.

Covering the police-court news around gang-infested Mulberry Bend was not a "ladies' game." There were times when the life of Jacob Riis hung on a hair, but he would not quit. His pen, reenforced by the strong right arm of Theodore Roosevelt, President of the Police Board, provided the pitiless publicity needed to kill the old lodging-house system. Working together these two men, so much alike in many ways, entered into a personal friendship which all the strenuous years that followed deepened and enriched. The fight to cut through Mulberry Bend, tear down its tenements, and substitute a life-giving park for this breeding-place of death by disease and violence was a harder matter. At last Jacob Riis was privileged to see green grass and groups of dancing children, where had been bands of

desperate criminals. The very hallways in Henry Street where a young Danish immigrant used to get a free night's lodging—unless the police found him—are now full of boys and girls who are finding inspiration and guidance at the Jacob Riis House, a settlement founded by the King's Daughters.

A few years before his death he paid a visit to his native land. He was summoned to Copenhagen to dine at the palace, where King Christian decorated Jacob Riis, "America's Most Useful Citizen," with the ancient Cross of the Crusaders. But these two men were not meeting for the first time.

Years before, Jacob Riis, the carpenter's apprentice boy, had arranged to meet his older brother at the art-gallery housed in a wing of the palace. The simple country lad, with three days' experience in Copenhagen, asked directions of a friendly man. On the way to the gallery his guide started a friendly conversation in which the boy frankly expressed his opinions, as a sixteen-year-old boy quite naturally will at times. Great was the astonishment and embarrassment of Jacob Riis when his brother informed him that his guide had been the king! However, King Christian also made a mistake that day, for he did not recognize in the boy at his side the future brilliant reporter, the crusader of the slums, and Denmark's best gift to America.

The Cross of the Crusaders came years later, but all the elements of greatness were in the boy carpenter who met the king. Suffering and endurance developed and demonstrated his qualities and the decision in the shadow of Grace Church dedicated them and all that they might grow to be to the service of others. In that decision and dedication lies the secret of the career of Jacob Riis.

HORACE TRACY PITKIN

Few people are called upon in these days actually to lay down their lives as martyrs to the cause of Christ. Such, however, was the supreme sacrifice made by Horace Tracy Pitkin, Yale '92. Pitkin was anything but the wide-brimmed-hat, be-spectacled, umbrella-carrying, Bible-under-the-arm sort of missionary. He was one of the thousands of strong, virile, alert, consecrated Christian statesmen, who are continually going to the ends of the earth to aid in bringing into being an era of Christianized social

relationships. The missionaries of today are preachers, yes, because only through the lips and the life lived can the Good News of a Kingdom of brotherly men be made known. But they are more than preachers—they are Christian social engineers—and such was Pitkin.

As a lad Pitkin's ambition was to make electricity and its application to the needs of the times, his life-work. He no doubt would have made a great success in it, as he had unusual abilities in that direction. But his uncle turned his thoughts toward the ministry and after long and serious questioning and much prayer, he decided to renounce his chosen ambition and enter Christ's service. He began at once to prepare for his life-work. At the age of fifteen he entered Phillips Academy, Exeter, and from the beginning took his stand as a Christian. He became a power among his associates as a Christian leader. With the introduction of the Christian Endeavor movement into his church, Pitkin became its first president. He also took part in the school athletics and was a social leader.

At the age of eighteen, and with this same vision of service to his fellows, and his ability as a leader, he entered Yale. He carried with him an enthusiasm, optimism, and spirit of good cheer which drew strong friends to him. He was no one-sided Christian. He wrote for the college papers and was a good student, missing the Phi Beta Kappa stand by only a small margin. He excelled in tennis and took an active interest in football and rowing. His musical ability was a great joy to himself and his friends. He was a member of the University Glee Club. So proverbial was his success in overcoming difficulties, that "If anybody kin, Pit kin" became a current pun among his friends. At the Northfield student conference at the end of his Freshman year he made his decision to enter the Student Volunteer Movement. Three years at Union Seminary, after graduating from Yale, and one year as a traveling secretary for the Student Volunteer Movement completed his preparations.

He offered himself to the American Board of Commissioners for Foreign Missions and in May, 1897, he reached Tientsin, China; by September he and his wife were settled in their own station at Paotingfu. In the summer of 1900 came the Boxer uprising. Determined to stamp out completely the foreign

devils and to exterminate their religion and converts, the Boxers soon surrounded Paotingfu. In June they killed the missionaries in the China Inland and Presbyterian missions. On July 1st they advanced to attack the Congregational compound. Pitkin and two lady missionaries were the only ones remaining. The Boxer hordes surrounded the little group. It was entirely one-sided, and Pitkin fell defending the two ladies, who were then taken into a temple and murdered. A man, unusual only in his quiet service and splendid devotion to Christ and his fellowmen, Horace Tracy Pitkin still lives, challenging every red-blooded youth to face squarely the call of the ungrasped opportunities for Christian statesmanship in the awakening East.

ROBERT E. LEE

He came of fighting stock—this Robert E. Lee—this man beloved alike by North and South, revered for his sterling Christian character, respected for his brilliant generalship, and admired for his wonderful loyalty and patriotism. His father was the famous "Light Horse Harry" Lee of Revolutionary War fame, and his forefathers fought with Richard Coeur de Lion, known through story and song to every boy.

Virginia claims him as her own, since he was born in Westmoreland County, Virginia, January 19, 1807. The great manor-house, Stratford, with its legends and histories dating back to the time when the Queen of England helped by her gifts in building it, the great trees, the open country, the endless plantations, all helped to give him a love for home; for the great out-of-doors; for Nature and God. The responsibility for the care of his invalid mother fostered those great and gentle qualities in him which made him the idol of his soldiers, who gladly endured all the hardships of war because of their loyalty to his leadership.

Admitted to West Point at eighteen, he proved that success is possible by application and study. This great military school cherishes among its traditions the fact that his record there was nearly perfect in every respect. He was soon to need all the military knowledge he had gained. He was engaged in engineering work when the Mexican War broke out and his country called him. As Captain of the Engineers, he was assigned the hazardous task of "mapping" the Mexican country for the advancing

American Army. He participated in the fall of Vera Cruz and assisted materially in the victory. Following the close of this war he returned to West Point as Superintendent of the Academy, but his love for active military life led him to Texas as the leader of a body of troops against the Indians. He succeeded to the entire satisfaction of his superior officers.

Then came the great war of the sixties. When Virginia cast her lot with the South, Robert E. Lee decided that his place was with his native State, despite his former connection with the United States Government. It was a hard decision, but he made it unflinchingly. Colonel Lee served first as the Commander of the Virginia Forces; then, upon the organization of the Confederate War Department, he was made Military Adviser to President Davis. He led the campaign against the Federal forces in West Virginia and also directed the construction of the famous coast defenses in Georgia and the Carolinas. He commanded in the Peninsular Campaign and throughout the balance of the war. General Lee's famous stand with ragged, half-starved, yet undaunted men against a superior number of well-equipped troops is an achievement which has gone down in military history, and his final surrender, when he saw that further fighting was useless, in order to save the lives of hundreds of his men, is another example of his great heart.

The five years following the close of the war were given to his country with the same unswerving loyalty with which he had served his State. Forgetting the past, he threw himself into the problems of his beloved Southland, brought about by after-the-war difficulties, and accepted the Presidency of Washington College at Lexington, Virginia, because he felt that the greatest service he could render his nation would be the training in leadership of the choice young men of the South.

While actively engaged in his great reconstruction labors, he died, October 12, 1870.

Ranking as a soldier with warriors such as Napoleon and Wellington; fearless as his noble forefathers; comparable to a little child in gentleness and courtesy; imbued with the spirit of the Master; loving the great out of doors and embracing all the qualities of leadership and manhood, General Robert E. Lee

stood as a man four-square. His life challenges the young manhood of America to greater and nobler living.

HERBERT ROSWELL BATES

Among the immigrant people of New York's lower West Side and the equally mixed but entirely different population of the great university on Morningside Heights, Herbert Roswell Bates was completely at home. A personal acquaintance with this friendly-spirited man was a rare privilege. Into forty-three years he crowded a lifetime of Christian service. For several generations the Bates family had produced physicians. High school life seemed to strengthen Herbert's ambition to follow the family profession. But when he was eighteen his mother expressed her hope that he might enter the ministry. The same night his mother suddenly died. From that time the boy's road took a new turn.

Those who knew Herbert Roswell Bates as a man find it easy to imagine the attitude of "Herb" Bates, the high school boy, to a Hi-Y Club with its program for high standards of Christian character, if there had been such a movement at that time. As a matter of fact, for a year after he finished high school he took up teaching and became an enthusiastic leader of the young people of his school and community in "creating, maintaining, and extending" such standards.

Entering Hamilton, he soon took his place in the life of the college. He was generally popular because of his splendid social spirit, but he never fell into the class of college men described by Ketcham as "prominent enough to be popular but not positive enough to be powerful." His friends were stunned one day to learn that Bates had been suspended under charge of theft. Refusing to go back on a fellow-student who had come to him for help, Roswell Bates remained silent under the accusation and left college in disgrace. Worn out and seriously ill from the strain, he maintained his position. Fortunately the facts were finally made clear and Roswell Bates returned to college more popular and more influential than ever.

The Negro church of the college town was split by a quarrel. This college man solved the problem by taking the pastorate. He threw himself into the leadership of these simple colored people

with such unselfish devotion that he brought the factions together and greatly built up the church. In his visits to the homes of his peculiar parish, Roswell Bates must have determined the special path his later ministry was to take. When he had completed his seminary course he took up work on New York's crowded East Side. His greatest service, however, was rendered at Spring Street Church. Almost every form of Christian social service found expression at Spring Street Church under his inspiring direction. He not only knew the problems of his people—he could make others appreciate them. He preached Christianity and he lived it. Consequently, he was in great demand as a speaker to college men. He never stopped with an address, but was forever finding the chance to deal with fellows one at a time. As a result, he has left his successors by the score—boys and men whom he won and trained for Christian service.

His enthusiasm was unlimited, but his labors were too heavy. He could not rest, with so much pressing to be done. Too late he was persuaded to take a sea trip to South America, and he consented on the ground that he would have opportunity to visit some of the mission stations. In the summer of 1913, while in Cuzco, Peru, Herbert Roswell Bates was suddenly taken away. As high school boy, college man, and Christian minister his life was joyous, rich, and convincing.

BOOKER T. WASHINGTON

Every American boy likes to read the lives of America's great men. Of these none is more thrilling than those of Washington and the log cabin presidents. Certainly no less interesting in his life and no less remarkable in his achievements was Booker T. Washington, the greatest southern Negro. He ranks first among the great men of the world who have risen highest above their circumstances.

He was born in a slave cabin, and inherited the handicaps of color, poverty, and prejudice. While he never knew exactly the year of his birth, or who his father was, his recollections of his boyhood days as a slave and his experience during the Civil War are most vivid. So far as the record goes, he was born in Franklin County, Virginia, in 1858 or 1859. He did not even have a name until he named himself. His early training as a

slave and a Negro could not smother those qualities of character which have placed his name high in the hall of fame.

His experience in sleeping on the floor and enduring the hardships of a Negro boy of his day gave him determination. Over and over again in his autobiography, "Up From Slavery," he says: "I was determined to succeed!" "I would not be discouraged!" He came early to desire an education. The successive steps from learning his figures written on the salt barrels where his father worked, through his experience with a "Blue Back Speller," his evening study alone, his long journey to Hampton, and many other stages in his securing an education are full of thrill. His ambition in this line is the more remarkable when one considers that it was so rare for a boy of his race. His greatest encouragement came from his mother and his teachers, whose affections he always won. His examination for college entrance at Hampton Institute was to sweep and dust a class room. This he did in his characteristic, conscientious, and thorough manner and won for himself a place in the school. His life was so ordered by a guiding Hand that all his experience gradually prepared him for the work he was to do in the uplift of his own race. He never despised small things, whether it was the scant opportunity to realize his ambitions for an education, the six eggs donated towards helping him build a college, or the chicken house in which he started Tuskegee Institute.

While his early life centers about his experience as a slave boy and the process by which freedom came to him, and his middle life about his struggle for an education and the heroic price he paid, his later life is the history of the call to the leadership of Tuskegee and its marvelous development. Many temptations came to him to go into politics, but his great conviction that he must serve his race held him true to his chosen cause.

The spirit of his life is its most charming trait. He lived to serve. He never held any bitterness against his owners, as a slave, or against the white people or the system. He rose above narrowness and prejudice.

His winning spirit is best illustrated by a story he tells himself. In his haste to make a train after an evening engagement, he asked a white cabman to carry him to his train. The man re-

plied, "I wouldn't haul a nigger." Booker T. immediately said, "Well, you ride in the cab and I will drive you."

After constant work at Tuskegee for eighteen years, he and his wife were given a trip to Europe by women of Boston. On this journey the famous Americans were many times honored. They took well with Queen Victoria, dined with royalty of England, and were called upon to speak and be present at many auspicious gatherings. But the greatest surprise that ever came to Booker T. Washington was the honorary degree conferred on him by Harvard University, a degree from the oldest and most renowned university in America. Tears came into his eyes when he was informed of this, the greatest honor that ever came to him. His whole life rose up before him—his struggles as a slave and as a coal miner, the time when he was without food and clothing and when he made his bed under a sidewalk, his struggles for an education, the trying days at Tuskegee when he did not know where to turn for a dollar to continue the work—all this passed before him and made his honor seem more dazzling and unreal.

His life from beginning to end is a continuous story of adventure on new paths for men of his race. His book, "Up From Slavery" ranks among the most fascinating biographies and is read by people of many nations.



CHAPTER VIII

HEALTH AND ENDURANCE[1]

GEORGE J. FISHER, M.D.

Fitness

Two things greatly affect the conditions under which a boy lives in these days. One is that he lives indoors for the greater part of the time, and the other is that he must attend school, which is pretty largely a matter of sitting still. Two things, therefore, are needs of every boy: outdoor experience and physical activity.

To secure endurance, physical power, physical courage, and skill, the first thing needful is to take stock of one's physical make-up, then put the body in the best possible condition for doing its work, and keep it in good order.

Proper Carriage

"Walk with head up and chest raised" is a good slogan for any boy who desires an erect figure. One can scarcely think of a round-shouldered PIONEER. Yet there are such among the boys who desire to be PIONEERS.

There is no particular exercise that a boy can take to cure round shoulders. The thing to remember is that all exercise that is taken should be done in the erect position; then the muscles will hold the body there.

An erect body means a deeper chest and room for the important organs to work, thus giving them the best chance to act.

A few setting-up exercises each day in the erect position before breakfast will help greatly to get this result.

[1] Adapted by permission from "The Official Handbook for Boys" of the Boy Scouts of America, copyright, 1911–1914, 1916, 1917, 1918, by Boy Scouts of America.

Growth

The chief business of a boy is to grow. He may have other affairs, but this is his chief concern. He should have a few simple rules for living and make them a part of his daily life.

Outdoor Exercises

Each day should have its outdoor exercises. Walking is a splendid form of exercise. Walk to school or business; don't ride unless it is absolutely necessary because of unusual distance. Walk with a good, swinging stride, with chest well up and spine fairly straight. Slow running across country is great; it lacks strain and yet affords splendid stimulation to heart and lungs. Cross-country running and hiking should be favorite sport for boys taking this Program. A boy ought to have at least two hours of sport daily in some good, vigorous game, such as baseball or tennis, and, if he can possibly afford it, at least two periods a week, of an hour each, in a gymnasium, where he can receive guidance in body building. Boys under sixteen should avoid exercise involving strain, such as weight lifting, or sprint running over one hundred yards, or long-distance racing. They should have careful guidance in all gymnastic work. Work on apparatus may prove harmful unless of the right sort. The horse and parallel bars should be used largely to jump over, rather than to perform upon. Exercises demanding a sustained support of the body with the arms are not helpful, but may be harmful. The chief activity should be of the legs, to strengthen heart and lungs. A boy should be careful not to *overdo*. In his excitement to win in a contest he is likely to do this unless cautioned. A boy should never try to reduce his weight. Now that there are weight classes in sports for boys, there is a temptation to do this and it may prove very serious. Severe training for athletics should be avoided. Boys at this age should not play vigorous indoor games like basket ball for longer than two ten-minute halves, and should not play at all where the air is foul. All training should be in moderation.



Physical Examinations

Every boy ought to have, as he takes up this Program, a thorough physical examination. Some physician who is interested in boys will be willing to act as examiner of a group. A boy should know the condition of his heart and lungs before entering any contest. If he has any defects in his breathing apparatus—nose, throat, or lungs—these should be attended to or they will seriously interfere with his tests.

Baths

Besides exercises a boy should have simple, workable rules for living. A boy ought to take a good soap bath at least twice a week, and always after he has played a hard game or performed work of a nature that has caused him to perspire freely.

Each morning a quick sponge bath, immediately after the setting-up exercises, should be the first order of the day, in water as cool as he can stand it, followed by a good rub with a coarse towel. If there is a feeling of warmth after the bath, it is helpful; if not, the water should be slightly warm, or only a portion of the body should be bathed at a time.

Pain

One thing that should be regarded seriously is pain in any form in any part of the body. If there is a dull headache frequently, find out what causes it. Pain in the knee, the arch of the foot, or at any point, should be taken seriously. Pain means something wrong. It may be brave to bear it, but it is not wise. It may mean something serious. Remember that pain felt in one part of the body may be the result of something wrong in another part. See a wise doctor about it.

Eating

And now in reference to what one shall eat. The average boy ought to have, and usually does have, an appetite like an ostrich. Three points to remember are: don't eat too much, most healthy boys do; don't eat meat more than once a day; and, third, don't eat anything that you always taste for several hours after you have eaten it, even though you like it.

The fact that you taste it is an indication that your stomach is having a wrestling match with the food. Some people can't digest onions; others thrive upon them. Some can't eat cucumbers; others can do so readily. The one must give them up; the other can continue to eat them. Each person has some peculiarity of diet, and must observe it to be happy. Many a race has been lost through failure to obey this rule. A simple diet is best. Most boys eat too much of a mixed nature. They mix pickles, soda water, frankfurters, and chocolate without fear or favor. No wonder there is so much stomach-ache. In boys' camps the chief trouble is indigestion caused by this riot of eating. Such boys are laying up for themselves for the future some beautiful headaches and bilious attacks, which, when they become chronic later, will cry out against their owners and seriously impair their value. Don't eat when very tired; lie down a while and get rested. Don't eat heavily before exercising; or, better, put it the other way around, don't exercise immediately after eating. Never eat when excited or angry, and very lightly when worried or when expecting to study hard. We should learn to eat slowly and chew our food thoroughly, remembering that all food before it can be taken up in the blood must be as thin as pea soup. Chewing well will help the digestive organs greatly. Always wash the hands before eating. Be careful about eating food that has been exposed to the dust unless it has been washed. Drink freely of clean water between meals. Never use a public drinking cup without thoroughly rinsing it. Don't touch your lips to the rim of the cup.



On the hike and in camp drink pure water and milk, because typhoid fever is found where there are impure water, dirty milk, and flies.

"The number who died of typhoid fever in the United States during 1912 probably exceeded the number killed in six of the greatest battles of the Civil War. People are now learning, however, that this disease can be prevented by drinking only pure water and pure milk. Flies may carry typhoid and other germs and therefore should be destroyed. Garbage should be

kept in closed cans, manure should be covered, and the breeding of these pests in other places should be prevented by similar means. It is hoped that flies may soon be permanently destroyed.

"If a youth, then, finds himself in a community with a dangerous water or milk supply, he will want to use every means in his power, for the sake of his own health and that of his family and friends, to correct this condition. Though boiling the water and avoiding milk will prevent infection, more permanent measures should be taken. If health officials and other municipal authorities are enlightened and have the welfare of the community at heart, they will take steps at once to remedy conditions if the danger be properly brought to their attention."

Coffee and Tea

Should a boy drink coffee or tea? This is a question often asked by boys. Coffee and tea are the greatest stimulants known. But does a boy need a stimulant? What is a stimulant and what does it do? A stimulant is a whip, making the body do more at a given time than it ordinarily would. It doesn't add any fiber to the tissues, doesn't add any strength, isn't a food, but merely gets more out of the tissues or nervous system than they would ordinarily yield. Of course, there is a reaction because the tissues have had nothing to feed on. Herbert Fisher says that Peary's men, who drank lots of tea on their voyage north, during the most trying time of their trip, showed it in their haggard faces and loss of tissue. Their own tissues had turned cannibal and fed on their own material. Stimulants are not foods. They add no strength to the body. They exact of the body what ought not to be exacted of it. There is always a reaction and one is always worse off as a result. Growing boys especially should have nothing to do with tea, coffee, or any stimulant.



Alcohol and Tobacco

Alcohol is not a stimulant, but is really a narcotic that is very depressing. It dulls rather than stimulates. The same is true

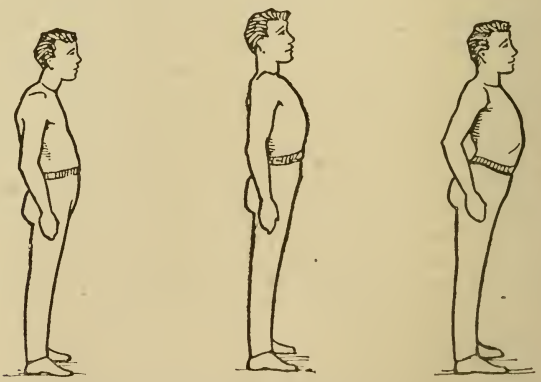
of nicotine in tobacco. No growing boy should use either. The first athletes to drop out of a race are usually drinkers, and all trainers know that smoking is bad for the wind.

Constipation

Those boys who find their digestion sluggish and are troubled with constipation may find the following plan helpful in overcoming the condition:

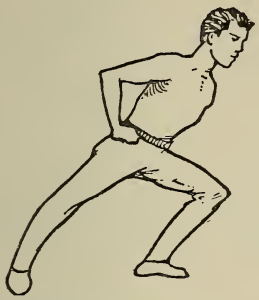
Drink a cool, copious draught of water upon arising. Then take body-bending exercises (see illustrations). Follow with sponge bath. Then, if possible, take a walk around the block before breakfast. After school play some favorite game for at least an hour. In the absence of this, take a good hike for three or four miles or a longer bicycle ride. At least twice a week, if possible, enter a gymnasium class and make special emphasis of body-bending exercises.

Have a regular time for going to stool. A good plan is to go just before retiring and immediately upon arising. Go even though you feel no desire to do so. A regular habit may be established by this method. Always respond quickly to any call of nature. Toasted bread and graham bread and the coarser foods and fruit will be found helpful.

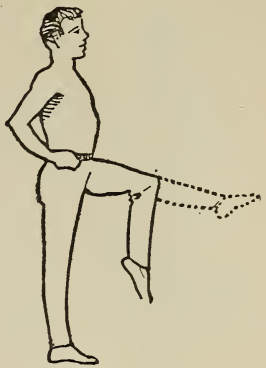


Incorrect *Incorrect* *Correct*

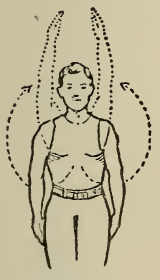
This correct position should be taken before commencing exercises.



Position; Hips firm.
Movement; Forward lunge on left foot. Repeat to right.



Position; Hips firm; flex left knee and thigh.
Movement; Extend left leg. Repeat same to right.



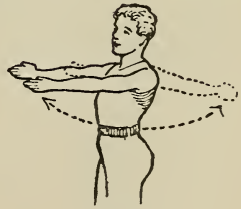
EXERCISE 1

Position; Heels together, arms down and at sides, palms in.
Movement; Swing arms side-ways, upward to vertical, and return.



EXERCISE 2

Same as Exercise 1, except that arms are swung forward, upward vertical.



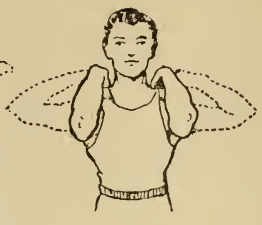
EXERCISE 3

Position; Arms front horizontal. Movement; same style as rest, swing to side horizontal and return.



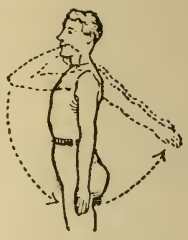
EXERCISE 4

Position; Forearms flexed at side of chest.
Movement; Thrust arms forward and return.



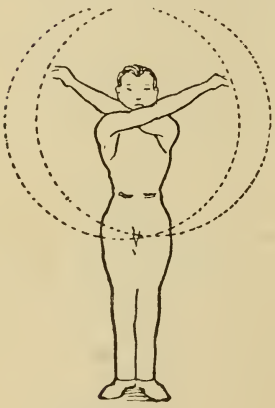
EXERCISE 5

Position; Arms at front, horizontal, forearms flexed, fingers on shoulders.
Movement; Swing to side horizontal and return.



EXERCISE 6

Position; Same as No. 5.
Movement; Swing downward, forward bringing arms beyond sides of body, raise on toes with end of backward swing.



EXERCISE 7A

Position; Arms at vertical, thumbs locked, head fixed between arms.



EXERCISE 7B

Movement; Bend forward as far as possible without bending knees and return.



EXERCISE 8

Position; As at 7a but with thumbs not locked.
Movement; Arms circles downward, inward, across chest. Return.



Hips firm position.
Incorrect.



EXERCISE 9
Position; Hips firm (hands on hips).
Movement; Full knee bent.



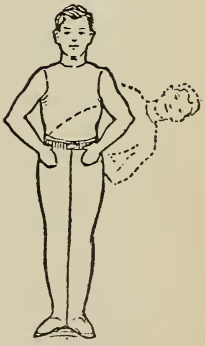
Hips firm position.
Correct.



EXERCISE 10
Position; Hips firm.
Movement; Forward bend.



EXERCISE 11
Position; Hips firm.
Movement; Backward bend.



EXERCISE 12
Position; Hips firm.
Movement; Sideward bend, right and left.

The Teeth

Closely related to the matter of eating is the proper care of the teeth.

Perhaps—without care—the mouth is the filthiest cavity of the body. We spend a great deal of energy trying to keep food clean and water pure, but what is the use if we place them in a dirty cavity as they enter the body? Fully ninety per cent of the children examined in our schools have decayed and dirty teeth. These decayed teeth provide cavities in which food particles decay and germs grow, and through which poisons are absorbed. These conditions need not exist. Now just a few suggestions about the care of the teeth. Everybody should own his own tooth brush. The teeth should be scrubbed at least twice a day. At night they should receive most careful cleansing, using a good tooth paste or powder. Then again in the morning they should be rinsed, at which time simply clean water is sufficient. Time should be taken in the cleansing of the teeth. The gums should be included in the scrubbing, as this acts as a good stimulant to the circulation of the blood to the teeth. Not only should the teeth be brushed with a backward and forward stroke, as we ordinarily do, but also upward and downward the length of the teeth. In addition to the scrubbing, particles of food which are lodged between the teeth should be removed after meals, or at least after the last meal of the day. This is most safely done by the use of a thread of a fair degree of thickness. Dentists and druggists furnish this thread in spools. Hard toothpicks often cause bleeding and detach fillings. A dentist should be visited once every six months, so as to detect decay immediately. Never have a tooth drawn unless absolutely necessary.

Care of the Eyes

Most troubles of the eyes come from eye-strain. Styes and red lids are usually due to this cause. See how foolish, therefore, it is to treat these conditions as causes, when really they are only the result of something else. Of course, there are exceptions. Sometimes wild hairs and skin disease affect the eyes. Eye-strain should be removed by wearing well-fitting glasses and then these other conditions will disappear. If constant

headache is experienced or the eyes itch or become tired easily, there is possibly eye-strain.

One way to test the eye is for vision. If you cannot read the first line at 20 feet, the second line at 15 feet, and the third line at 10 feet clearly with both eyes and with each eye separately, consult a first-class oculist.

C L V F O T

E A C F D L O T

D V C L A E O T F

Never buy eyeglasses unless fitted by an expert. Such glasses should be worn in proper relation to the eyes. They should not be permitted to slide forward on the nose or to tilt. They may need to be changed often, as the eyes grow better.

For reading, a good, steady light is needed. Never sit in front of a window facing it to read. Always have the light come from the rear and over the left shoulder, preferably. The book should be held on a level with the face and not too close. Sit erect. Reading when lying down or from the light of a fireplace is unwise.

Care of the Ears

Affections of the ears are exceedingly serious and may lead to grave results. Any trouble with them should be given very prompt attention and a good specialist consulted. Pain in the ear, or ringing or hissing sounds, and particularly any discharge from the ear, should not be neglected. Any sign of deafness must be heeded. Sometimes deafness occurs in reference to some particular sounds, while hearing is normal to others. No matter what the degree of deafness may be, do not neglect to see a physician about it. Ordinarily the tick of a watch can be heard at a distance of thirty inches. If you cannot hear it at that distance and can hear it say at fifteen inches then you are just one-half from the normal in your hearing. The test should be made with the one ear closed.

Ear troubles are often caused by sticking foreign objects in the ear, such as hairpins, pins, matches, toothpicks, and lead pencils. Never pick the ear with anything. Often the ear drum is pierced in this way. The normal ear does not require anything more than the usual cleansing with a wash rag over the end of the finger.

If wax to any extent accumulates in the ear it should be removed by syringing, but this ought to be done by a physician.

In camp an insect might crawl into the ear and if alive, cause pain. Putting oil or other fluids in the ear to drown it is unwise. If a foreign body should get in the ear, it should not cause great alarm unless attended with severe pain. If a physician is not available at once, such objects may remain for a day or two without serious results. Syringing usually removes them, but it should be remembered that some objects, like peas or beans, swell if made wet. In swimming, water is apt to get into the ear and cause annoyance. A rubber ear stop can be secured and placed in the ear at the time of swimming, thus keeping the water out. Cotton should not be stuffed into the ear to keep water out, as it may get inside.



One thing to keep in mind is that catarrh of the nose and throat often extends into the ear pas-

sages, through a tube which reaches from the throat to the ear, and that syringing of the nose and throat frequently causes trouble in the ear.

Care of Nose and Throat

Always breathe through the nose. Air passing through the nose is warmed and moistened and cleansed; thus it gets to the lungs in better condition. If you cannot breathe clearly through the nose, have it examined. There may be a growth present which needs to be removed. To become a good runner this is important. Adenoids, which are growths far back in the mouth, often interfere with nose breathing and are serious in other ways. Don't stick anything in the nose; and nose picking is not cleanly. If crusts form in the nose, use a little vaseline to soften them. Don't blow the nose too vigorously. It may cause trouble.

Frequently sore throat may be due to enlarged tonsils, which need either treatment or removal. Colds and tuberculosis make their attack through the nose, throat, and lungs. During the recent influenza epidemic the following summary was compiled by a national conference of Army, Navy, and civilian doctors.

How to Keep from Getting Influenza

1. Avoid contact with other people so far as possible, especially avoid crowds indoors, in street cars, theaters, motion picture houses, and other places of public assemblage.
2. Avoid persons suffering from "colds," sore throats, and coughs.
3. Avoid chilling of the body or living in rooms of temperature below 65 degrees or above 72.
4. Sleep and work in clean, fresh air.
5. Keep your hands clean and keep them out of your mouth.
6. Avoid expectorating in public places and see that others do likewise.
7. Avoid visiting the sick.
8. Eat plain, nourishing food and avoid alcoholic stimulants.
9. Cover your nose with your handkerchief when you sneeze, your mouth when you cough. Change handkerchiefs frequently. Promptly disinfect soiled handkerchiefs by boiling or washing with soap and water.

10. Don't worry, and keep your feet warm. Wet feet demand prompt attention. Wet clothes are dangerous and must be removed as soon as possible.

What to Do if You Have Influenza

1. If you get a cold, go to bed in a well ventilated room. Keep warm.

2. Keep away from other people. Do not kiss any one.

3. Use individual basins, knives, forks, spoons, towels, handkerchiefs, soap; wash plates and cups.

4. Every case of influenza should go to bed at once under the care of a physician. The patient should stay in bed at least three days after fever has disappeared and until convalescence is well established.

5. The patient must not cough or sneeze except when a mask or handkerchief is held before the face.

6. He should be in a warm, well ventilated room.

7. There is no specific for the disease. Symptoms should be met as they arise.

8. The great danger is from pneumonia. Avoid it by staying in bed while actually ill and until convalescence is fully established.

9. The after-effects of influenza are worse than the disease. Take care of yourself.

10. Strictly observe the state and city rules and regulations for the control of influenza.

"Of the infectious diseases, tuberculosis is one of the most serious. It is the great white plague. It kills hundreds of thousands, and causes an annual expense in the United States of about $1,000,000,000. Today people are learning to prevent and cure it by the simplest means imaginable—living in the fresh air. Although diet and sleep are important, the one great preventive and curative factor is fresh air."

"The youth who has any tendencies towards tuberculosis should consider outdoor living more important than school life or any other occupation. If his physician advises life in the open for a year or two, he should quickly put aside other ambitions and adopt that mode of life which means recovery and health."

Care of the Feet

This is an important matter with boys who will make frequent hikes and tramps. The first thing to do is to walk right. The straight foot is the normal foot. The normal foot is broad at the ball with space between the toes. How different from the awful feet we see with toes twisted upon each other and crowded together. Walk with feet pointing straight forward. The feet that turn outward are weak feet. Shoes therefore should be straight on the inner border, broad across the ball, and have a low, broad heel.

When a foot is normal, the inner border does not touch the floor. By wetting the foot one can see readily whether he is flat-footed by the imprint made. The following exercises are good to strengthen the arches of the foot if there is a tendency to flat feet: (1) Turn toes in, raise the heels, and come down slowly on the outer borders of the feet; (2) Walk with heels raised and toes pointing inward, or walk on the outer borders of the foot, inner borders turned up.

Shoes should fit the feet comfortably. Tight shoes, or shoes that fit loosely, will cause callouses or corns. The way to get rid of these is to remove the cause—namely, the badly fitting shoes. Soft corns are due to pressure between the toes. The toes in such cases should be kept apart with cotton. Pointed shoes should be avoided. Patent-leather shoes are non-porous and hot. Ingrown toenails are exceedingly painful. The pain comes from the nail piercing the soft parts. Allowing the nail to grow long and beyond the point of the tender spot will help; and on the side of the nail and under it cotton should be inserted to protect the soft parts.



Hot foot baths will generally relieve tired feet. Boys should be very careful in trimming corns for fear of blood poisoning. Never buy plates for flat feet at a store. They may not be adapted to your needs. Always consult a foot specialist for treatment and buy plates if needed on his order. Only severe cases need plates.

Many boys are troubled with perspiring feet and are frequently annoyed by the odor resulting. Those who are thus troubled should wash the feet often and carefully, especially between the toes. If the feet are dusted with boric acid the odor will disappear. At first it may be necessary to change the stockings daily. In severe cases two pairs of shoes should be used, changing alternately.

Care of the Finger Nails

The chief thing in the care of the finger nails is to keep them clean. Each boy should possess and use a nail brush. Always wash the hands thoroughly before eating and use the end of a nail file to remove the accumulation still remaining under the nails. Keep the nails properly trimmed. They should not be too long nor too short. If long they are liable to break and if short to be sensitive. Biting the nails is a filthy practice, mutilates the fingers dreadfully, and makes them unsightly. It is a very hard habit to overcome ofttimes and will require persistent effort in order to succeed. By keeping the nails smooth the tendency to bite them will to some extent be overcome. A bitter application to the nails will often remind one of the habit, as often the biting is done unconsciously. The nails should never be pared with a knife; a curved pair of scissors is better, as the cutting should be done in a curved direction; but the best method is to use a file. The skin overhanging the nails should be pressed back once a week to keep them shapely. Rubbing the nails with a nail buffer or cloth will keep them polished.



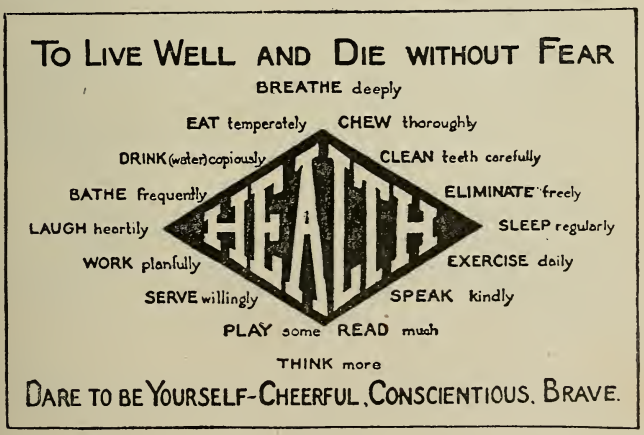
Sleep

One thing a growing boy wants to be long on is sleep, and yet he is most likely to be careless about it. It is during sleep that a boy grows most and catches up. During his waking hours he tears down and burns up more tissue than he builds. Good, sound, and sufficient sleep is essential to growth, strength, and endurance. A boy should have at least nine or ten hours' sleep out of every twenty-four. If you lose on this amount on one day, make it up the next. When-

ever unusually tired, or when you feel out of trim, stay in bed a few hours more if it is possible. A boy should wake up each morning feeling like a fighting cock. When he doesn't he ought to get to bed earlier that night. Sleep is a wonderful restorative and tonic. It helps to store up energy and conserve strength.

Sleeping Out of Doors

The conditions under which one sleeps are as important as the length of time one sleeps. Many people are finding it wonderfully helpful and invigorating to sleep out of doors. Often a back porch can be arranged, or in summer, a tent can be pitched in the yard. But, by all means, the sleeping room should be well ventilated. Windows should be thrown wide open. Avoid drafts. If the bed is in such relation to the windows as to cause the wind to blow directly on it, a screen can be used to divert it or a sheet hung up as a protection. Good, fresh, cool air is a splendid tonic. Open windows in winter are a splendid preparation for camping out in summer.



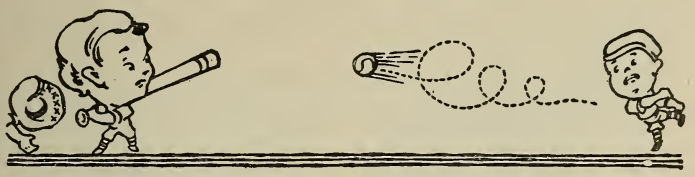
Conservation

In this chapter much has been said of the active measures which a boy should take in order to become strong and well.

We should be equally concerned in saving and storing up natural forces we already have. In the body of every boy who has reached his teens, the Creator of the universe has placed a very important fluid. This fluid is the most wonderful material in all the physical world. Some parts of it find their way into the blood, and through the blood give tone to the muscles, power to the brain, and strength to the nerves. This fluid is the sex fluid. When this fluid appears in a boy's body, it works a wonderful change in him. His chest deepens, his shoulders broaden, his voice changes, his ideals are changed and enlarged. It gives him the capacity for deep feeling, for rich emotion. Pity the boy, therefore, who has wrong ideas of this important function, because they will lower his ideals of life. These organs actually secrete into the blood material that makes a boy manly, strong, and noble. Any habit which a boy has that causes this fluid to be discharged from the body tends to weaken his strength and to make him less able to resist disease, and often unfortunately fastens upon him habits which later in life can be broken only with great difficulty. Even several years before this fluid appears in the body such habits are harmful to a growing boy.

To become strong, therefore, one must be pure in thought and clean in habit. This power which I have spoken of must be conserved, because this sex function is so deep and strong that there will come times when temptation to wrong habits will be very powerful. But remember that to yield means to sacrifice strength and power and manliness.

For boys who desire to know more of this subject we would suggest a splendid book by Dr. Winfield S. Hall, entitled, "From Youth into Manhood." Every boy in his teens who wants to know the secret of strength, power, and endurance should read this book.



CHAPTER IX

TRACK AND FIELD ATHLETICS

SECTION 1. BASIS OF GRADING FOR ATHLETIC EVENTS
SECTION 2. RULES FOR CONDUCT OF ATHLETIC EVENTS
SECTION 3. SCORING TABLES
SECTION 4. SUGGESTIONS FOR BOYS' ATHLETIC MEET
SECTION 5. ATHLETIC RECORDS
SECTION 6. CHRISTIAN ATHLETES

SECTION 1

Basis of Grading for Athletic Events

The weight classification has been chosen for the athletic events of this program because it is the most simple, conforms to existing efficiency tests, and is most practical for the *Leader*. The following is the weight classification:

Class I.	60 to 80 lbs. inclusive	80 lb. class.
Class II.	81 to 95 lbs. inclusive	95 lb. class.
Class III.	96 to 110 lbs. inclusive	110 lb. class.
Class IV.	111 to 125 lbs. inclusive	125 lb. class.
Class V.	18 years and under Weight unlimited	unlimited class.

In rare instances there are boys who are handicapped by a straight weight classification. For instance, a boy twelve years old weighing 120 lbs. would be outclassed in the 125 lb. class. There are a few boys who are given an undue advantage. A boy seventeen years old weighing 100 lbs. would outclass any boy of fourteen or fifteen in the 110 lb. class. In competition with other groups, the straight weight classification should be followed, but in competition within the group the *Leader*, with the consent of the group, could make exceptions of these boys

and grade them according to the following averages and classifications:

A summary of study of the average weight of 67,987 boys in the United States gives the following results for the varying ages:

12 years— 69.8 lbs.	15 years— 91.4 lbs.
13 years— 75.2 lbs.	16 years—111.9 lbs.
14 years— 82.3 lbs.	

These averages, applied, result in the following age and weight classification which may be used:

Class I.	Boys 12 years, irrespective of weight. Boys 13 years, under 81 lbs.
Class II.	Boys 13 years, 81 lbs. and over. Boys 14 and 15 years, under 96 lbs.
Class III.	Boys 14 and 15 years, 96 lbs. and over. Boys 16 and 17 years, under 111 lbs.
Class IV.	Boys 16 and 17 years, 111 lbs. and over.
Class V.	Boys 18 years, irrespective of weight.

Athletic Events Summary

Class I 60 to 80 lbs. inclusive 80 lb. Class	*Class II* 81 to 95 lbs. inclusive 95 lb. Class
1. One Lap Potato Race	1. One Lap Potato Race
* 2. Three Lap Potato Race	* 2. Four Lap Potato Race
3. 50 Yard Dash	3. 75 Yard Dash
* 4. 75 Yard Dash	* 4. 100 Yard Dash
5. Standing Broad Jump	5. Standing Broad Jump
* 6. Pull Up—Four Times	* 6. Pull Up—Five Times
* 7. Running High Jump	* 7. Running High Jump
8. Running Broad Jump	8. Running Broad Jump
* 9. One Day Hike Eight Miles	* 9. One Day Hike Ten Miles
*10. Century Hike 100 Miles in a Year	*10. Century Hike 100 Miles in a Year
11. Baseball Throw	11. Baseball Throw
Each event counts a maximum of	20 points
Total, 10 events,	200 points

The six starred events are required. Participants may pick four of the remaining five to make ten events.

Class III
96 to 110 lbs. inclusive
110 lb. Class

1. Two Lap Potato Race
* 2. Five Lap Potato Race
3. 75 Yard Dash
* 4. 100 Yard Dash
5. Standing Broad Jump
* 6. Pull Up—Six Times
* 7. Running High Jump
8. Running Broad Jump
* 9. One Day Hike
Twelve Miles
*10. Century Hike
100 Miles in 6 Mos.
11. Baseball Throw for Distance
12. Shot Put

Class IV
111 to 125 lbs. inclusive
125 lb. Class

1. Two Lap Potato Race
* 2. Six Lap Potato Race
3. 100 Yard Dash
* 4. 220 Yard Dash
5. Standing Broad Jump
* 6. Pull Up—Seven Times
* 7. Running High Jump
8. Running Broad Jump
* 9. One Day Hike
Fourteen Miles
*10. Century Hike
100 Miles in 6 Mos.
11. Baseball Throw for Distance
12. Shot Put

Class V
Weight unlimited
18 years and under
Unlimited Class

1. Three Lap Potato Race
* 2. Eight Lap Potato Race
3. 100 Yard Dash
* 4. 220 Yard Dash
5. Standing Broad Jump
* 6. Pull Up—Eight Times
* 7. Running High Jump
8. Running Broad Jump
* 9. One Day Hike
Eighteen Miles
*10. Century Hike
100 Miles in 6 Mos.
11. Baseball Throw for Distance
12. Shot Put

Each event counts a maximum of 20 points
Total, 10 events, 200 points

The six starred events are required. Participants may pick four of the remaining six to make ten.

SECTION 2

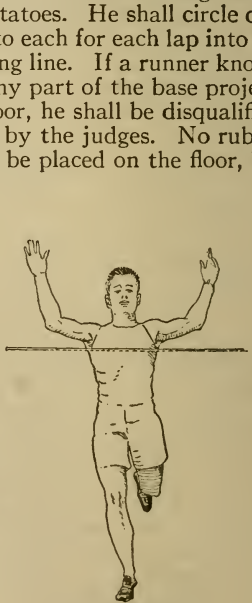
Rules for Conduct of Athletic Events

Potato Race

1. This race is run around boxes four inches deep, placed upon stands two feet high, whose base shall not measure more than 12 inches square. They shall be placed upon the floor 31 feet apart at their outside edges. The boxes shall not be loaded or fastened in any way to the floor. The base of the box is placed in the center of a sixteen-inch square (outside measurement), marked on the floor. When competition is within the group, a chair with tin pail makes a very good box and stand; in inter-group competition standard boxes should be used. The runner shall start with one potato in his hand on a line with the outside edge of the box in which are placed the other potatoes. He shall circle outside the boxes, transferring one potato each for each lap into the other box and finish across the starting line. If a runner knocks over a box or moves a box so that any part of the base projects beyond the square marked on the floor, he shall be disqualified, but he may be given one other trial by the judges. No rubber or mats of any similar material shall be placed on the floor, but the use of resin will be allowed.



Sprint—Start



Sprint—Finish

Sprints

2. *The Distance* should be accurately measured with a cotton or steel measuring tape. If there are only one or two stop-watches, each boy should run alone. It will help the boy who is being tested if one or more boys run with him as "pace makers."

The Start is of great importance. The "crouching position" is the most popular. The front foot is placed about six inches behind the line; the rear foot is placed so that when kneeling the knee is opposite the instep of the front foot. Small holes are made in which the feet are placed. When the starter says, "Get on the mark," the boy kneels on the knee of his rear leg and places his hands on the line. At the command, "Get set," this knee is raised slightly and the body is pushed forward a little, the boy being on the alert for the report of the pistol or the word, "Go." A pistol with blank cartridges or a toy pistol is much better than saying "Go" as it makes it easier for the timers as well as for the boy.

The Timers are those who take the time of the runners. Stop-watches should be used, as it is impossible to time accurately with ordinary watches. The watches should be accurate and tested by a jeweler so that they are regulated alike. The timers stand at the finish line and start their watches when they hear the pistol or the word, "Go," and stop them when the boy whom they are timing crosses the finish line. It is an aid to both runners and timers to stretch a piece of yarn across the finish line just where the boys will be able to break it with their chests. Two watches should be used for a boy running alone or for the first boy when more than one is running. If there is a difference between the time of the two watches the slower time is recorded. Each boy will be allowed to run but once, unless the person in charge allows a second trial on account of the boy's tripping or falling or for some unavoidable cause. Considerable experience is necessary to time accurately.

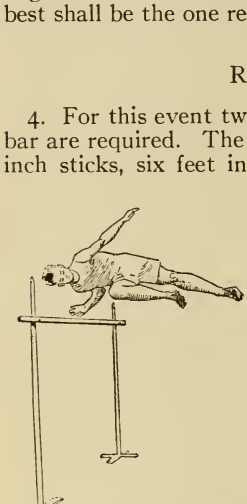
Standing Broad Jump

3. A piece of wood eight inches wide is sunk level with the ground. This is called the "take-off." A line may be made on the ground where a board is not used. The boy stands on the board so that his toes are just even with the edge. With clenched fist he swings his arms forward and backward and jumps so that he lands on both feet. If he steps over the edge of the board it is a foul and counts as one trial. The jump is measured by placing

the free end of the tape at the edge of the board and measuring to the nearest mark on the ground made by *any part* of the boy. If a boy falls or steps backward, the distance measured is not where his feet landed, but where he made a mark when he fell or slipped back. Care should be taken to have the tape at right angles to the board. Each boy shall have three trials and the best shall be the one recorded.

Running High Jump

4. For this event two uprights, two pins, and a cross-stick or bar are required. The uprights may be made of two- by-three-inch sticks, six feet in length. Beginning two feet above the ground, holes are bored one inch apart. The uprights should be placed on the ground nine to twelve feet apart. The cross-stick or bar should be one inch square and ten to fourteen feet in length. A rope cannot be used instead of the cross-stick. A bamboo fishing-rod is often used for the cross-stick. This bar rests on five-inch pins or wire nails, which project not more than three inches from the uprights. The ground is dug up and leveled off where the boys will land.



Running High Jump

The bar is placed at the lower limit of the weight class and is raised one inch at a time. Each boy is allowed three jumps at each successive height, and takes his jump in turn. Those who fail on their first trial take their second trial in turn and those who fail on their second trial take their third in their proper order. When a boy fails on this third trial at any height, he is declared out of the test and is given credit for the last height which he cleared. Knocking down the bar is counted as a trial. Running under the bar is a "balk." Three balks are counted as one trial. The boy may run any distance and from any direction before making his jump.

The height of each jump is measured by holding the free end of the tape so that it just touches the ground directly beneath the center of the bar and reading the height on the upper side of the

bar or stick. Care should be taken to see that the ground is perfectly level and that the tape is held vertical.

Running Broad Jump

5. For this event it is very important to have the take-off board sunk level with the ground, so that it is very firm. The boy may run any distance, starting slowly and gradually increasing his speed, and judging his distance so that he will jump from the take-off board with one foot and land on the ground on both feet. If the boy's foot goes beyond the edge of the take-off board, it is a foul and counts as one trial. Each boy has three trials and the best jump is recorded.

The ground should be dug up and leveled off so that the boys will not injure themselves when landing. The ground should be smoothed over after each jump. The measurement is made in the same way as for the Standing Broad Jump.

Putting the Shot

6. The shot is a metal ball, a stone, or a bag filled with shot weighing exactly eight pounds. It can be made by melting some old lead in a cup and trimming it so that it is as round as possible. It is "put" with one hand and in doing so, the shot must be above and not behind the shoulders. It must not be a throw. A "put" is made from a circle seven feet in diameter. The circle is marked on the ground and is divided into halves by a line drawn through the center. In the middle of the circumference on the front half is placed a curved stop-board, four feet long, four inches high, and fixed in place by means of pins fastening it to the ground. In making a "put," the feet of a boy may rest against but not on top of this board.

A fair "put" is one in which no part of the boy touches the top of the stop-board, the circle, or the ground outside of the circle and the boy leaves the circle by its rear half, which is the half directly opposite the stop-board. A "put" shall be a foul if any part of the boy touches the ground outside the front half of the circle before the "put" is measured. The measurement is made from the inner edge of the stop-board to the nearest mark on the ground made by the shot. Each boy is allowed three trials in turn and the best "put" is recorded.

Throwing for Distance

7. This event may be conducted on the road or in a field. The starting line is made on the ground. Another line is made fifteen feet back of the starting line. In making his throw, the boy starts at the back line and runs to the starting line. If he goes over the starting line, it is a foul and counts as a trial.

Each boy is allowed three trials in turn, and the best throw is recorded. Only the regulation baseball that weighs five ounces and is nine inches in circumference is used for the test. The measure is taken from the starting line to the nearest mark on the ground.

SECTION 3

Scoring Tables

CLASS I. 60–80 LB. CLASS

Pts.	One Lap Potato Race	Three Lap Potato Race	50 Yard Dash	75 Yard Dash	Pts.
	sec. fifths	sec. fifths	sec. fifths	sec. fifths	
20	4.3	16.3	6.3	10.2	20
19	4.4	16.4	6.4	10.3	19
18	5.0	17.0	7.0	10.4	18
17	5.1	17.1	7.1	11.0	17
16	5.2	17.2	7.2	11.1	16
15	5.3	17.3	7.3	11.2	15
14	5.4	17.4	7.4	11.3	14
13	6.0	18.0	8.0	11.4	13
12	6.1	18.1	8.1	12.0	12
11	6.2	18.2	8.2	12.1	11
10	6.3	18.3	8.3	12.2	10
9	6.4	18.4	8.4	12.3	9
8	7.0	19.0	9.0	12.4	8
7	7.1	19.1	9.1	13.0	7
6	7.2	19.2	9.2	13.1	6
5	7.3	19.3	9.3	13.2	5
4	7.4	19.4	9.4	13.3	4
3	8.0	20.0	10.0	13.4	3
2	8.1	20.1	10.1	14.0	2
1	8.2	20.2	10.2	14.1	1
0	8.3	20.3	10.3	14.2	0

Scoring Tables

Class I. 60–80 Lb. Class (Continued)

Pts.	Standing Broad Jump	Running High Jump	Running Broad Jump	Baseball Throw	Pts.
	ft. in.	ft. in.	ft. in.	ft.	
20	7.1	4.1½	14.2	130	20
19	6.11¾	4.0¼	13.9	127½	19
18	6.10½	3.11	13.4	125	18
17	6.9¼	3.9¾	12.11	122½	17
16	6.8	3.8½	12.6	120	16
15	6.6¾	3.7¼	12.1	117½	15
14	6.5½	3.6	11.8	115	14
13	6.4¼	3.4¾	11.3	112½	13
12	6.3	3.3½	10.10	110	12
11	6.1¾	3.2¼	10.5	107½	11
10	6.0½	3.1	10.0	105	10
9	5.11¼	2.11¾	9.7	102½	9
8	5.10	2.10½	9.2	100	8
7	5.8¾	2.9¼	8.9	97½	7
6	5.7½	2.8	8.4	95	6
5	5.6¼	2.6¾	7.11	92½	5
4	5.5	2.5½	7.6	90	4
3	5.3¾	2.4¼	7.1	87½	3
2	5.2½	2.3	6.8	85	2
1	5.1¼	2.1¾	6.3	82½	1
0	5.0	2.0½	5.10	80	0

Scoring Tables

Class II. 95 Lb. Class

Pts.	One Lap Potato Race	Four Lap Potato Race	75 Yard Dash	100 Yard Dash	Pts.
	sec. fifths	sec. fifths	sec. fifths	sec. fifths	
20	4.0	22.0	9.4	12.1	20
19	4.1	22.1	10.0	12.2	19
18	4.2	22.2	10.1	12.3	18
17	4.3	22.3	10.2	12.4	17
16	4.4	22.4	10.3	13.0	16
15	5.0	23.0	10.4	13.1	15
14	5.1	23.1	11.0	13.2	14
13	5.2	23.2	11.1	13.3	13
12	5.3	23.3	11.2	13.4	12
11	5.4	23.4	11.3	14.0	11
10	6.0	24.0	11.4	14.1	10
9	6.1	24.1	12.0	14.2	9
8	6.2	24.2	12.1	14.3	8
7	6.3	24.3	12.2	14.4	7
6	6.4	24.4	12.3	15.0	6
5	7.0	25.0	12.4	15.1	5
4	7.1	25.1	13.0	15.2	4
3	7.2	25.2	13.1	15.3	3
2	7.3	25.3	13.2	15.4	2
1	7.4	25.4	13.3	16.0	1
0	8.0	26.0	13.4	16.1	0

Scoring Tables

Class II. 95 Lb. Class (Continued)

Pts.	Standing Broad Jump	Running High Jump	Running Broad Jump	Baseball Throw	Pts.
	ft. in.	ft. in.	ft. in.	ft.	
20	7.7½	4.5½	15.2	154	20
19	7.6¼	4.4¼	14.9	151½	19
18	7.5	4.3	14.4	149	18
17	7.3¾	4.1¾	13.11	146½	17
16	7.2½	4.0½	13.6	144	16
15	7.1¼	3.11¼	13.1	141½	15
14	7.0	3.10	12.8	139	14
13	6.10¾	3.8¾	12.3	136½	13
12	6.9½	3.7½	11.10	134	12
11	6.8¼	3.6¼	11.5	131½	11
10	6.7	3.5	11.0	129	10
9	6.5¾	3.3¾	10.7	126½	9
8	6.4½	3.2½	10.2	124	8
7	6.3¼	3.1¼	9.9	121½	7
6	6.2	3.0	9.4	119	6
5	6.0¾	2.10¾	8.11	116½	5
4	5.11½	2.9½	8.6	114	4
3	5.10¼	2.8¼	8.1	111½	2
2	5.9	2.7	7.8	109	3
1	5.7¾	2.5¾	7.3	106½	1
0	5.6½	2.4½	6.10	104	0

Scoring Tables

Class III. 110 Lb. Class

Pts.	Two Lap Potato Race	Five Lap Potato Race	75 Yard Dash	100 Yard Dash	Pts.
	sec. fifths	sec. fifths	sec. fifths	sec. fifths	
20	9.3	27.0	9.3	12.0	20
19	9.4		9.4	12.1	19
18	10.0	28.0	10.0	12.2	18
17	10.1		10.1	12.3	17
16	10.2	29.0	10.2	12.4	16
15	10.3		10.3	13.0	15
14	10.4	30.0	10.4	13.1	14
13	11.0		11.0	13.2	13
12	11.1	31.0	11.1	13.3	12
11	11.2		11.2	13.4	11
10	11.3	32.0	11.3	14.0	10
9	11.4		11.4	14.1	9
8	12.0	33.0	12.0	14.2	8
7	12.1		12.1	14.3	7
6	12.2	34.0	12.2	14.4	6
5	12.3		12.3	15.0	5
4	12.4	35.0	12.4	15.1	4
3	13.0		13.0	15.2	3
2	13.1	36.0	13.1	15.3	2
1	13.2		13.2	15.4	1
0	13.3	37.0	13.3	16.0	0

Scoring Tables

Class III. 110 Lb. Class (Continued)

Pts.	Standing Broad Jump	Running High Jump	Running Broad Jump	Baseball Throw	Shot Put	Pts.
	ft. in.	ft. in.	ft. in.	ft.	ft.	
20	8.0	4.7½	16.2	178	34	20
19	7.10¾	4.6¼	15.9	175½	33	19
18	7.9½	4.5	15.4	173	32	18
17	7.8¼	4.3¾	14.11	170½	31	17
16	7.7	4.2½	14.6	168	30	16
15	7.5¾	4.1¼	14.1	165½	29	15
14	7.4½	4.0	13.8	163	28	14
13	7.3¼	3.10¾	13.3	160½	27	13
12	7.2	3.9½	12.10	158	26	12
11	7.0¾	3.8¼	12.5	155½	25	11
10	6.11½	3.7	12.0	153	24	10
9	6.10¼	3.5¾	11.7	150½	23	9
8	6.9	3.4½	11.2	148	22	8
7	6.7¾	3.3¼	10.9	145½	21	7
6	6.6½	3.2	10.4	143	20	6
5	6.5¼	3.0¾	9.11	140½	19	5
4	6.4	2.11½	9.6	138	18	4
3	6.2¾	2.10¼	9.1	135½	17	3
2	6.1½	2.9	8.8	133	16	2
1	6.0¼	2.7¾	8.3	130½	15	1
0	5.11	2.6½	7.10	128	14	0

Scoring Tables

Class IV. 125 Lb. Class

Pts.	Two Lap Potato Race	Six Lap Potato Race	100 Yard Dash	220 Yard Dash	Pts.
	sec. fifths	sec.	sec. fifths	sec. fifths	
20	9.2	33	11.2	28.0	20
19	9.3		11.3	28.2	19
18	9.4	34	11.4	28.4	18
17	10.0		12.0	29.1	17
16	10.1	35	12.1	29.3	16
15	10.2		12.2	30.0	15
14	10.3	36	12.3	30.2	14
13	10.4		12.4	30.4	13
12	11.0	37	13.0	31.1	12
11	11.1		13.1	31.3	11
10	11.2	38	13.2	32.0	10
9	11.3		13.3	32.2	9
8	11.4	39	13.4	32.4	8
7	12.0		14.0	33.1	7
6	12.1	40	14.1	33.3	6
5	12.2		14.2	34.0	5
4	12.3	41	14.3	34.2	4
3	12.4		14.4	34.4	3
2	13.0	42	15.0	35.1	2
1	13.1		15.1	35.3	1
0	13.2	43	15.2	36.0	0

Scoring Tables

Class IV. 125 Lb. Class (Continued)

Pts.	Standing Broad Jump	Running High Jump	Running Broad Jump	Baseball Throw	Shot Put	Pts.
	ft. in.	ft. in.	ft. in.	ft.	ft.	
20	8.7	4.9½	17.2	230	37.0	20
19	8.5¾	4.8¼	16.9	226	35.9	19
18	8.4½	4.7	16.4	222	34.6	18
17	8.3¼	4.5¾	15.11	218	33.3	17
16	8.2	4.4½	15.6	214	32.0	16
15	8.0¾	4.3¼	15.1	210	30.9	15
14	7.11½	4.2	14.8	206	29.6	14
13	7.10¼	4.0¾	14.3	202	28.3	13
12	7.9	3.11½	13.10	198	27.0	12
11	7.7¾	3.10¼	13.5	194	25.9	11
10	7.6½	3.9	13.0	190	24.6	10
9	7.5¼	3.7¾	12.7	186	23.3	9
8	7.4	3.6½	12.2	182	22.0	8
7	7.2¾	3.5¼	11.9	178	20.9	7
6	7.1½	3.4	11.4	174	19.6	6
5	7.0¼	3.2¾	10.11	170	18.3	5
4	6.11	3.1½	10.6	166	17.0	4
3	6.9¾	3.0¼	10.1	162	15.9	3
2	6.8½	2.11	9.8	158	14.6	2
1	6.7¼	2.9¾	9.3	154	13.3	1
0	6.6	2.8½	8.10	150	12.0	0

Scoring Tables

Class V. Unlimited Weight Class

Pts.	Three Lap Potato Race	Six Lap Potato Race	100 Yard Dash	220 Yard Dash	Pts.
	sec. fifths	sec. fifths	sec. fifths	sec. fifths	
20	15.0	32.3	10.4	26.0	20
19	15.1		11.0	26.2	19
18	15.2	33.3	11.1	26.4	18
17	15.3		11.2	27.1	17
16	15.4	34.3	11.3	27.3	16
15	16.0		11.4	28.0	15
14	16.1	35.3	12.0	28.2	14
13	16.2		12.1	28.4	13
12	16.3	36.3	12.2	29.1	12
11	16.4		12.3	29.3	11
10	17.0	37.3	12.4	30.0	10
9	17.1		13.0	30.2	9
8	17.2	38.3	13.1	30.4	8
7	17.3		13.2	31.1	7
6	17.4	39.3	13.3	31.3	6
5	18.0		13.4	32.0	5
4	18.1	40.3	14.0	32.2	4
3	18.2		14.1	32.4	3
2	18.3	41.3	14.2	33.1	2
1	18.4		14.3	33.3	1
0	19.0	42.3	14.4	34.0	0

Scoring Tables

Class V. Unlimited Weight Class (Continued)

Pts.	Standing Broad Jump	Running High Jump	Running Broad Jump	Baseball Throw	Shot Put	Pts.
	ft. in.	ft. in.	ft. in.	ft.	ft.	
20	8.11½	5.1½	18.2	270	42.0	20
19	8.10¼	5.0¼	17.9	266	40.9	19
18	8.9	4.11	17.4	262	39.6	18
17	8.7¾	4.9¾	16.11	258	38.3	17
16	8.6½	4.8½	16.6	254	37.0	16
15	8.5¼	4.7¼	16.1	250	35.9	15
14	8.4	4.6	15.8	246	34.6	14
13	8.2¾	4.4¾	15.3	242	33.3	13
12	8.1½	4.3½	14.10	238	32.0	12
11	8.0¼	4.2¼	14.5	234	30.9	11
10	7.11	4.1	14.0	230	29.6	10
9	7.9¾	3.11¾	13.7	226	28.3	9
8	7.8½	3.10½	13.2	222	27.0	8
7	7.7¼	3.9¼	12.9	218	25.9	7
6	7.6	3.8	12.4	214	24.6	6
5	7.4¾	3.6¾	11.11	210	23.3	5
4	7.3½	3.5½	11.6	206	22.0	4
3	7.2¼	3.4¼	11.1	202	20.9	3
2	7.1	3.3	10.8	198	19.6	2
1	7.11¾	3.1¾	10.3	194	18.3	1
0	6.10½	3.0½	9.10	190	17.0	0

SECTION 4

Boys' Athletic Meet Suggestions

A. EVENTS

I. SHORT DASHES

50 yards
75 yards
100 yards
80 yard low hurdle, 3 hurdle
80 yard high hurdle, 10 yard start, 15 yard finish, 6 hurdle
Sack race
Walking race

II. FIELD EVENTS

Standing broad jump
Running broad jump
Running high jump
Shot put, 8 and 12 lbs.
Baseball throw

III. TEAM EVENTS

Relay races are most interesting events. The standard relay is the four-man event, each running one-fourth of the entire distance. From the standpoint of creating interest and for the younger boys, the short-distance relays are most worth while. The shuttle method of running relays is a very quick one, as not only may runs be used with many variations, but shot put and jumps may be run off as relay events by this method. The following is an explanation of the relay and shuttle types of running relays:

RELAY TYPE

The competing teams are lined up in parallel columns of file, behind a take-off line which is marked across the field. The first player in each column, if the event be a jump, jumps forward from the mark. His jump is marked upon the ground by a sharp stick, or if indoors, by a piece of chalk. The column moves up, the first jumper goes to the rear of the line, and the second jumper toes the mark of the first and jumps forward in the same direction as the first jumper

jumped. The column moves forward and the third jumper jumps from the mark of the second. This continues until the entire team has jumped. The composite jump of the whole column determines the distance. Equal numbers of men must jump in each column.

In this type of meet it is necessary to have a very long field if you have large numbers in the columns. In view of this fact, the events should be selected which do not cover too great a distance. The race of the relay type, wherein men are stationed at equal distances along a given course, is pretty well known. The first runner touches off the second; the second, the third; and so on.

In the events of the relay type there should be an official for each team.

Events which can be used in this type of an athletic meet are:

Team relays
Standing broad jump
Frog race, in which competitors travel forward in frog leaps instead of running
Standing hop
Leapfrog jump, in which the down one toes a mark while the second takes a frog leap over his back for distance and gets down at the point where his heels broke the ground, for the third jumper to go over his back
Running broad jump
Weight-throw in back of neck. Weight is held by both hands and thrown backward
Back jump
Two standing broad jump
Standing hop

Shuttle Type

Teams are lined up in parallel columns behind a given take-off line. It is very essential that this take-off line be made prominent and permanent. The columns are grouped in pairs. No. 1 column competes against No. 2 column, No. 3 against No. 4, etc. The columns should be arranged so that the shortest player is in front of each. A good permanent line to

use for the shuttle type of meet is a tennis tape flush with the ground. If the event is a jump, the first competitor of one team takes his place at the take-off and jumps. His record is marked by a line, at one end of which is stuck up a sharp stick. The first competitor of the second column toes the line marked by the sharp stick and tries to jump from that position back to the original take-off. His jump is marked by a line and another sharp stick. The second jumper on the team that jumped first toes the mark made by the jumper on the opposing team, and jumps in the same direction as the first jumper representing his team. These two teams compete against each other, one team jumping against the other in shuttle fashion, until every man has jumped. If the last man to jump on the second team fails to come up to the original take-off, his team has lost the event; but if he jumps and reaches the original take-off line, his team is pronounced the winner. Team No. 3 is competing against No. 4; No. 5 against No. 6; and so on, at the same time that Teams No. 1 and No. 2 compete. Two officials should act, one to mark the jump of each team.

Suggested Events:

Standing broad jump
Running broad jump
Three running broad jumps
Standing hop
Running hop
Shot put
Hop, step, and jump
Backward jump
Baseball throw
Football punt
Football forward pass

B. Suggestions Concerning Athletic Meet

1. Rules

Rules governing all events are found in either the "Army and Navy Athletic Handbook," Association Press; or in the "A. A. U. Athletic Handbook," Spaulding.

II. SPRINTS

Mark out the course with either cord or white line. The lane in which each man runs should be at least three feet wide. Have two finishing posts at the finish line. Stretch a line of red wool or worsted from post to post to assist the judges. Have all starts and finishes plainly marked. It helps very much to have all finishes at the same place.

III. OFFICIALS

It is necessary to have the following officials. Their duties are stated in the handbooks referred to.

One Referee

Four Judges of the Finish, if picking three places: one to pick first place, two to pick second place, one to pick third place

Two or three Timers

One Starter

One Clerk of Course, an Assistant to run field events, and an Assistant to help him with track events

One Announcer

This is very important, both from the standpoint of getting runners out on time and of keeping the crowd informed.

One Scorer and an Assistant Scorer

If distance events are used or sprints are run on an oval track, inspectors would have to be placed at the turns.

If badges are furnished for the judges and several marshals or police are furnished, the track and field space can be kept clear. Roping the field, especially the space at the finish, helps in this respect.

IV. EQUIPMENT

1. *Track Events*

One gun and cartridges for the Starter

One whistle for the Starter

One whistle for the Referee

Numbers and safety pins for competitors

Red worsted for finish line

Score sheets for the Clerk of Course, and the Scorer, with extra sets for the Assistants

Stop-watches for Timers

2. *Field Events*

a. Jumps

Two standards seven feet high
Six cross-bars of wood or bamboo
One measuring tape or measuring stick
One shovel and rake
One take-off board, a joist four feet long, eight inches wide, sunk level with the ground
One balk line six feet from the take-off board
One soft landing pit, ten feet by twelve feet and in line with the take-off twenty-five feet long by four feet

b. Shot Put

One seven-foot circle
One curved toe-board, if possible four feet long, four and a half inches wide, and four inches high
Iron shots, eight and twelve pounds
One measuring tape

c. Baseball Throw

One regulation baseball
One measuring tape
(If measuring tape is not long enough, an arch may be marked off on the ground at any distance desirable and all throws can be quickly measured)

d. Sack Race

As many good sacks as will be needed in a heat

SECTION 5

Indoor Athletic Record

ATHLETIC LEAGUE OF NORTH AMERICA

Event	*Record*	*Name*	*Location*	*Date*
20 yd. swim on back	12 4/5 s.	R. M. Darnell	Memphis	10–21–16
20 yd. swim	8 1/5 s.	Clarence Lane	Honolulu	6–24–16
25 yd. swim	11 4/5 s.	F. S. Gillman	St. Paul	3–18–16
40 yd. swim	19 4/5 s.	John Kelii	Honolulu	
40 yd. dash, swim one turn	22 1/5 s.	Fred Ferguson	Canton	
50 yd. swim	24 2/5 s.	Clarence Lane	Honolulu	
50 yd. swim, breast stroke	34 s.	G. E. Reddall	Brooklyn	3–25–15
50 yd. swim, back stroke	30 s.	Harold Kruger	Honolulu	
75 yd. swim	39 3/5 s.	Clarence Lane	Honolulu	
100 yd. swim	56 4/5 s.	Clarence Lane	Honolulu	
100 yd. swim on back	1 m. 11 s.	Harold Kruger	Honolulu	
100 yd. swim, breast stroke	1 m. 18 4/5 s.	Wm. Fox	St. Paul	3–24–16
150 yd. swim, back stroke	1 m. 53 1/5 s.	Harold Kruger	Honolulu	
160 yd. relay swim	1 m. 15 2/5 s.	Duke Kahanamoku George Cunha Clarence Lane John Kelii	Honolulu	

200 yd. swim	2 m. 12 2/5 s.	Duke Kahanamoku	Honolulu	
200 yd. swim, breast stroke	3 m. 2 2/5 s.	Geo. Keawemahi	Honolulu	
220 yd. swim	2 m. 29 s.	Duke Kahanamoku	Honolulu	
400 yd. swim	6 m. 25 s.	Wm. Fox	St. Paul	3–18–16
400 yd. relay swim	3 m. 44 4/5 s.	Duke Kahanamoku George Cunha Clarence Lane Harold Kruger	Honolulu	7–22–16
500 yd. swim	6 m. 13 1/5 s.	Duke Kahanamoku	Honolulu	
500 yd. relay swim	4 m. 43 3/5 s.	John Kelii Duke Kahanamoku George Cunha Clarence Lane Harold Kruger	Honolulu	7–22–17
Plunge for distance	64 ft.	C. P. Schaub	St. Paul	4– 5–16
Under-water swim	202 ft.	G. E. Reddall	Brooklyn	3–25–15
Running high jump from springboard	7 ft. 10 in.	A. T. Robinson	Brooklyn	10–29–03
Running broad jump	21 ft. 1 3/4 in.	Ferdinand Tuers	Waterbury	12– 6–13
80 yd. relay swim, four men	42 4/5 s.	R. M. Darnell E. Wood R. V. Sims D. Boynton	Memphis	10–21–16

Plunge and swim under water	298 ft. 6 in.	Harry Boardman	St. Paul	7– 1–16
1/4 mile potato race	1 m. 38 3/5 s.	L. H. Perkins	San Francisco	4–27–14
8 potato race	33 1/5 s.	Robt. Brindle, Jr.	Woonsocket	2–13–15
60 yd. potato race	13 1/5 s.	A. J. Connor	Newport	3–13–16
220 yd. potato race	57 4/5 s.	A. J. Connor	Newport	3–13–16
18 ft. rope climb	4 3/5 s.	R. O. Best	Buffalo	7– 2–01
440 yd. walk	1 m. 22 2/5 s.	Edmund V. Ray	Albany	4– 6–10
800 yd. walk	3 m. 14 4/5 s.	W. J. Rolker	Brooklyn	2–25–16
1 mile walk	6 m. 42 2/5 s.	W. J. Rolker	Brooklyn	2–25–16
1 mile relay	3 m. 30 s.	G. J. Schnabel J. J. McEntel C. M. Borgman Horace Hocking	West Side, N. Y.	3–14–11
2 mile relay	8 m. 13 s.	F. Oswald H. Orchard	Newport	2–20–15
Snap under bar	8 ft.	Luther Miller	Greenville	3–15–16
Putting 16 lb. shot	41 ft. 10 1/2 in.	Arthur P. Stepp	Scranton	10–10–07
Putting 12 lb. shot	54 ft. 4 in.	R. J. Lawrence	Plainfield	3–13–09
Putting 8 lb. shot	55 ft. 1 in.	Wm. F. Wilkie	A. & N., Newport	1–23–15
Running long dive	14 ft. 8 in.	Louis Kilian	Orange	9–12–05
Running high dive from springboard	8 ft. 6 1/2 in.	Chas. Stewart	San Francisco	9–19–98
Running high dive	6 ft. 1 3/4 in.	Walter McNaughton	Plainfield	9–12–05
20 yd. dash	2 3/5 s.	Hinie Orchard	A. & N., Newport	2– 1–15

35 yd. dash	4 2/5 s.	Irving T. Howe	Boston, Mass.	2–19–16
40 yd. dash	4 3/5 s.	H. Orchard	A. & N., Newport	2– 1–15
50 yd. dash	5 3/5 s.	Irving T. Howe	Boston, Mass.	2–19–16
75 yd. dash	9 s.	Carl H. Buenzle	Scranton	10–10–07
100 yd. dash	11 1/5 s.	P. Seidenstricker	Buffalo	10–10–07
220 yd. dash	24 3/5 s.	Irving T. Howe	Boston, Mass.	2–19–16
300 yd. dash	35 2/5 s.	W. J. Marling	Boston, Mass.	2–19–16
Running high jump	6 ft. 1/16 in.	Thos. R. Moffitt	Philadelphia	4– 8–11
Standing broad jump	10 ft. 7 in.	A. M. Bohnert	San Francisco	4–14–15
Two standing broad jumps	21 ft. 3 1/4 in.	David Lane	Bridgeport	12– 5–02
Three standing broad jumps	32 ft. 11 1/2 in.	J. A. Macdonald	Melrose	3–13–01
Standing high jump	5 ft. 1/8 in.	Dr. R. M. Leggett	San Francisco	4–27–14
Pole vault for height	11 ft.	John Wicks	Gary, Ind.	4– 1–16
Fence vault	7 ft. 6 in.	Geo. M. Woodman	Ft. Worth	3–20–15
Standing hop, step, jump	30 ft. 2 in.	Wm. H. Hatfield	A. & N., Newport	1–21–16
Running hop, step, jump	38 ft. 1 in.	Roger E. Daisley	Brooklyn	4–12–15
Double kick	8 ft. 1 3/4 in.	F. C. Crane	Aurora	11–30–01
Running hitch and kick	9 ft.	Chas. R. Toothaker	Philadelphia	5–20–04
Running high kick	9 ft. 4 in.	Paul Auther	Lincoln, Neb.	3–27–08
1/4 mile run	55 4/5 s.	Frank Saurr	Chicago	3–15–08
600 yd. run	1 m. 21 4/5 s.	F. T. Donahue	Boston, Mass.	2–19–16
1/2 mile run	2 m. 3 1/5 s.	C. F. Souder	Toledo, O.	2–22–11
1000 yd. run	2 m. 27 3/5 s.	J. J. Losero	Boston	3–18–16

3/4 mile run	3 m. 52 2/5 s.	Harry Monroe	New Orleans	1–27–05
1 mile run—28 laps	4 m. 40 2/5 s.	Lt. F. V. McNair	Newport	3–30–12
2 mile run	10 m. 19 2/5 s.	Wm. H. Quinn	San Francisco	4–14–15

Outdoor Athletic Record

ATHLETIC LEAGUE OF NORTH AMERICA

Event	*Record*	*Name*	*Location*	*Date*
50 yd. dash	5 3/5 s.	B. G. Leake	Ft. Worth	1– 7–05
400 yd. relay	3 m. 53 4/5 s.	Harold Kruger Clarence Lane John Kelii George Cunha	Honolulu	6–24–16
56 lb. weight	30 ft. 3 1/2 in.	Wm. Lynch	A. & N., Newport	6–10–16
100 yd. dash	10 s.	C. W. Swenson	Chicago	
220 yd. dash	22 s.	N. J. Cartwell	Louisville	1–27–05
440 yd. run	52 3/5 s.	E. M. Tourtelot	Chicago	3–15–01
880 yd. run	2 3/5 s.	B. Dodd	Long Beach	4–11–08
1 mile run	4 m. 38 s.	Edw. O'Brien	New Haven	6–22–12
2 mile run	10 m. 19 3/5 s.	A. A. Haigh	Chicago	1–27–05
5 mile run	28 m. 10 1/5 s.	F. Barnikow	Meriden	9–18–09
1 mile relay	3 m. 36 1/5 s.	Paul Smith Elmer Millsap Eugene Kern Elliott Gibbs	Los Angeles	4–11–08

2 mile relay	9 m. 53 4/5 s.	W. McLaughlin, J. Cutchley, C. English, H. Dodd	Paterson	10–10–08
120 yd. hurdles	16 1/5 s.	W. T. Fishley	Chicago	4–30–01
220 yd. hurdles	27 s.	Eugene Kern	Pasadena	4–11–08
Standing broad jump	10 ft. 8 3/4 in.	C. M. King	Dallas	10–29–03
Three standing broad jumps	33 ft. 9 in.	C. M. King	Dallas	10–29–03
Standing high jump	4 ft. 10 in.	C. M. King	Dallas	10–29–03
Run, hop, step, jump	43 ft. 10 1/4 in.	Carl J. Sauer	Bridgeport	6–22–12
Running high jump	6 ft. 5/8 in.	Robt. C. Merriam	Pasadena	4–11–08
Running broad jump	21 ft. 11 5/8 in.	Elliott Gibbs	Pasadena	4–11–08
Pole vault height	11 ft. 5 1/4 in.	Harry Wessels	New Britain	9– 5–10
12 lb. shot put	46 ft. 6 1/4 in.	A. B. Gunn	Buffalo	6–22–07
16 lb. shot put	40 ft. 7 in.	A. B. Gunn	Buffalo	
12 lb. hammer without turn	130 ft.	E. VanGent	Ottumwa	6–18–10
12 lb. hammer with turn	123 ft. 5 in.	A. B. Gunn	Buffalo	6–22–07
16 lb. hammer with turn	128 ft. 7 in.	A. A. Johnson	St. Louis	
Discus (free style)	123 ft. 2 in.	Harry Kanatzer	Kansas City	7–24–09

SECTION 6

AMOS ALONZO STAGG

Yale '88

The memory of great athletes soon fades and new stars soon come on to hold the interest of the public and the boy to whom a great athlete is a hero. This is not true of A. A. Stagg, the "grand old man" of American amateur athletics. Perhaps no man in America has had more to do with raising college athletics to a high plane of sportsmanship.

Stagg first made his place as an athlete in high school at Orange, New Jersey, at Phillips Exeter Academy, and then at Yale where he graduated in the Class of 1888. While he played 'varsity football two years, being chosen all-American end one year, it was in baseball that he shone especially. During the five years that he pitched, Yale won the intercollegiate championship each year. During his year as captain he won from Harvard in two great games. In his last year Yale won what were probably two of the greatest series of intercollegiate baseball ever played, three of her five games with Harvard being won by one run and three of her four Princeton games resulting similarly, the other being a tie. While in college Stagg was urged to play professional ball and both before and after graduation was offered positions by six major league teams, but refused.



Stagg's greatest fame has been won as coach and athletic director at Chicago University, where he has served more than a quarter of a century, partly because of his tremendous influence for clean sport and high character. Former President Harper said of him: "His intense love for pure sport, his incorruptible spirit, his indefatigable effort, his broad-minded zeal, and his absolute fairness of mind and honesty of heart have exerted an influence upon western university and college athletes that has been felt far and wide and produced results of which we may well be reasonably proud."

Coach Stagg was active in Christian work at Yale, took a year's work in the Divinity School, was secretary of the Y. M.

C. A. two years, attended the Y. M. C. A. College at Springfield, Massachusetts, and as a coach does not hesitate to express his convictions regarding Christian character.

We would covet for every boy in America the rich privilege that was ours of chatting an hour with the rugged, weather-beaten "grand old man," athlete, coach, and Christian gentleman.

ARTHUR POE

Princeton '00

When we think of outstanding Christian athletes one of two men who first come to mind is Arthur Poe, Princeton '00. During the nineties and the first half of this century, a Princeton team without a Poe was like the Giants without Christy Mathewson. There was Johnny Poe, soldier of fortune, killed while fighting for France; then there was Arthur Poe, of whom "Bill" Edwards writes: "There never was as much real football ability concealed in a small package as there was in that great player, Arthur Poe."



Handicapped by injuries and perhaps by lack of weight, he did not make the 'varsity until his Junior year, but that year and the next he made football history with a vengeance. Playing end against Yale in '98, he grabbed a fumble and in spite of a very bad knee ran one hundred yards for a touchdown, the only score of the game. The next year he was again at end against Yale; the score stood Yale 10, Princeton 6, with less than a minute to play, Princeton on Yale's 35 yard line and her drop-kicker out of the game—a hopeless situation, but Arthur Poe kicked that goal which then counted five points and again he had beaten Yale. It can be taken for granted that he was the hero of Princeton that night. That year he was chosen by Camp as "all-American" end.

One of his classmates writes of him: "Arthur Poe, notwithstanding his size and the fact that he was far underweight, feared nothing on earth. . . . One of his outstanding qualities has always been his modesty."

Poe is a man of unquestioned Christian character, now holds a responsible business position, is Junior Warden in the Episcopal Church, superintendent of the Sunday school in that church, on the Board of Trustees of the Young Men's Christian Association, and does not hesitate to go on record before a group of older boys as to his belief in prayer and Christian living.

JOSEPH C. McCRACKEN, M.D.

Pennsylvania '01

It was Thanksgiving Day and Pennsylvania and Cornell were playing their annual football game on Franklin Field. No matter what the season may be, what the defeats or the victories, when the "Big Red" Cornell team journeys to Philadelphia there is sure to be excitement. This is the case today and just so it was on Thanksgiving Day, 1900. The usual tremendous crowd was out and the interest was just as intense as ever.

The event that remains in the memory of those present was not some particular play of the game, but the tribute paid to one of the players. One of Pennsylvania's men was injured and as he was led off the field the whole vast audience stood bareheaded, in silent tribute and admiration. One who has seen scores of games says it was the greatest ovation he has ever seen given a player. It was a tribute to character as well as to football ability.

The injured player was Joseph C. McCracken, a Kansas boy who while at Pennsylvania made a name for himself in football and track. With Hare he played and perfected the famous "guards back" play—perhaps the greatest football play ever devised. He was also captain of the University Track Team and broke the intercollegiate record in the shot put and the world's record in the hammer throw. His classmates' estimate of him is indicated by the fact that he was president of his class four years. Undoubtedly he was one of the most popular men ever graduated from the University of Pennsylvania.

McCracken had made the decision for the Christian life in a sod church out in Kansas and while in the university he stood by that decision. He was president of the University Young Men's Christian Association and did a real job. The President of his

Alma Mater writes about him: "I don't know of any one who is a finer Christian than Joe McCracken. His influence as a Christian on the campus of the University of Pennsylvania was simply marvelous. He has been such a consistent, manly Christian that everybody who has learned to know him admires him. He is modest, unassuming, and yet very forceful and capable."

McCracken decided to become a missionary and is now Dean and Professor of Surgery in the Pennsylvania Medical School, which is the Medical Department of St. John's University, Shanghai, China.

Country boy, great athlete, popular college student, Christian leader, missionary—we have an idea that Joe McCracken would say it has all been infinitely worth while.

BRANCH RICKEY

Ohio Wesleyan '04

President and Manager, Cardinal Baseball Team
National League, St. Louis

Ask any boy in St. Louis who the popular man of the city is and there will be no mistaking his answer. If the boy happens to be a member of the "Cardinal Knot Hole Gang" his answer will come with a bang. The "Cardinal Knot Hole Gang" is just a part of a plan for allowing a city to own financially and sentimentally its professional baseball club. Generally a professional ball club is owned by one man or a small group of men, who are in it for the money and who may even live in another town. Not so with the Cardinals, which is simply the name of the St. Louis National League baseball team, for the people of St. Louis, lots of them, own that team—they bought small shares of stock in the organization and the Cardinal Knot Hole Gang is just an organization of boys who by meeting certain requirements get passes to the games. The boys of St. Louis shout for the Cardinals.

The leader in the idea is Major Branch Rickey, one of the interesting men in professional baseball—interesting because he is a leader, has new ideas, makes good on them, and is not afraid to stand for the thing he believes in.



Rickey graduated from Ohio Wesleyan University in 1904. While in the university he played 'varsity football, basket ball, and baseball and was a star in all of them. He was one of the best all-round athletes Ohio has ever had. After graduation he coached at Ohio Wesleyan, Alleghany College, and the University of Michigan. While at Michigan his baseball teams were uniformly successful.

During this time he also played professional ball, catching for the St. Louis and New York American League teams until he was injured and obliged to give up playing. One of the things that made him interesting at this time was his refusal to play on Sunday. Afterwards Rickey became manager and vice-president of the St. Louis American League Club and finally organized a company and purchased the Cardinals. He is now President and Manager of that club—the St. Louis National League Club.

Rickey's college mates swear by him and enthuse over him yet; the big league officials thoroughly respect him, and the managers know that he will give them a mighty good fight; and the boys of St. Louis shout for Rickey and the Cardinals.

Athletic, managerial, and executive ability, however, are only a part of this man's achievements. He holds degrees of Bachelor of Arts, Bachelor of Literature, and Doctor of Jurisprudence, and at Michigan University Law School he won high honors. He was a major in the American Expeditionary Force in France in the World War.

Rickey became a Christian while in college, is now a member of the Methodist Church, is on the Board of Directors of the Y. M. C. A., and gives all the help he can to work among boys. The following is his own attitude on some points: "A clean, straightforward, right-thinking athlete is the best. The boys who do not play fair with themselves in their training are uncertain in their work and do not last. I do not have boys of bad habits in my club or in the organization in which I am connected. I do not inquire about their religious views or practices. *I think the strongest have both.*"

WILLIAM STEPHEN CHANDLER
Wisconsin '18

It is always interesting to delve into the records of athletes of former generations. It is especially gratifying to read of those men who were great athletes and also men of sterling character. Former generations, however, had no monopoly on that type of athlete. They are just as prevalent now as then, and we are optimistic enough to believe more so.



Basket ball has come to be a major college sport and is occupying an increasingly large place in college athletics. In the central west, the "Big Ten" University Conference, the University of Wisconsin has gained a reputation for its winning basket-ball teams. This was especially true during the years 1915 to 1918. We were watching a cracking good game one night between Wisconsin and another large university team. There were only a few minutes left to play and Wisconsin was behind, but there came a rally with a snap and a rush that was not to be denied. Wisconsin had the habit and won the game.

That "habit" was largely built around the center, who stood six feet and more and played the game every minute. "Bill" Chandler was a star basket-ball man when a member of the Robert Waller High School, Chicago. As soon as he became a sophomore in the university and eligible, he made the 'varsity basket-ball team and played three years, was captain in his senior year and for three years was chosen as center of the "All-Western Conference" team. The last year he was also captain of the Mythical Five.

Chandler enlisted before graduation and was stationed at Great Lakes. Here he also played center and starred on the Great Lakes team. Chandler was a grand basket-ball man, one of the great ones; he was a good leader and had that battling spirit that kept him going against great odds; that he was popular among his fellows is proved by the fact that he was president of his class, was a member of the Y. M. C. A. cabinet and of several honorary fraternities.

Our next look at Chandler after the basket-ball game mentioned above was at a large meeting of older boys where the lanky, modest captain was quietly and seriously telling the fellows his views of the Christian life. We learned then that he had for years been a member of the church, had been president of a Sunday school class of about one hundred boys, and that during his university days he had been making many talks to older boys such as we heard him make. He is living the Christian life himself and he believes in telling other fellows about Christianity.

LIEUT. LAURENS C. SHULL, D.S.C.

Chicago '16

To be a "Three 'C' " man at the University of Chicago is no small achievement. To do that and win the unqualified endorsement of coach, professor, and pastor as a splendid Christian is more; and to give one's life on the battlefields of France, being awarded the Distinguished Service Cross, would seem to be the natural result of a spirit of devotion, service, and Christianity.



This is the record of Laurens C. Shull, Chicago '16: When in high school at Sioux City, Iowa, "Spike" was captain of the football, baseball, and basket-ball teams. In the university he played tackle on the 'varsity football team, center on the basketball team, and was pitcher on the baseball team. He was chosen all-Western tackle after playing on the championship football team of 1915. In 1916 he was captain of the baseball team.

It was our privilege to watch Spike in action on the gridiron and the basket-ball floor, and we enjoyed it. We have seldom seen a finer specimen of physical manhood, but it is not so much because of his athletic career that he is included in these lists. Star athlete he was, but what men say of him means more.

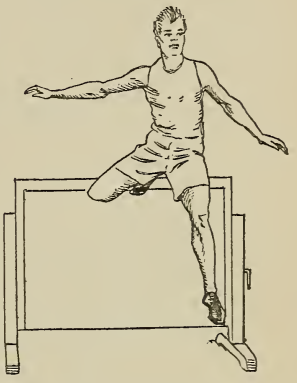
One of his professors, commenting on his religious life, said: "His God was as essential to him as his clothes."

General Pershing, in advising the War Department of the awarding posthumously of the Distinguished Service Cross to

Lieutenant Shull said: "Near Soissons, France, July 19, 1918, he led his platoon with brilliant courage in two attacks, was badly wounded in a third when with equal vigor he advanced against a machine gun nest."

His university pastor says of him:

"One evening, I think in his junior year in the university, when he had been tackle on the Conference Championship eleven, pitcher on the nine, and center on the basket-ball team, he knocked at my door in Hitchcock Hall and began the conversation by saying that he wanted to join our church. He explained that he had been having a rather stiff time with some things in college, and that he had suddenly realized that if he did not turn over a new leaf, he would not become the kind of a Christian man his father was, whom he called the finest man he knew. When I remarked that if he took this step all the university would know about and discuss it, he replied that he wanted to *nail up his flag so that it would never come down*, and that he would like to be baptized as soon as possible. Shortly after, in the baptistry over which our service flag now hangs with a gold star in his memory, I baptized him.



"The following Decision Day in our Sunday school, 'Spike' Shull told his own story and urged the boys and girls not to put off committing themselves to the Christian life so many years as he had done. As a result of his moving appeal, many of our boys and girls, and also two college graduates of his own age who heard it, were baptized and joined the church.

"At the outbreak of the War, 'Spike' Shull was among the first to enter an officers' training camp and among the very first to go overseas as a Second Lieutenant in the Regular Army. The last letter I had from him, written at the Front, spoke of the great difficulty, discomfort, and danger of their situation, but went on: 'You can safely say that we are happy. To be among

the first is our desire.' In July, 1918, being then a First Lieutenant in command of Company G, 26th Regiment, First Division, A. E. F., he led his men in three successive charges on a machine gun nest, in the last of which he received severe wounds that caused his death on August 5th."



CHAPTER X

AQUATICS

Section 1. Swimming
Section 2. Swimming Records

SECTION 1

B. Deane Brink

Oh, boy! It was great! Never was there anything that brought so much joy into life as that "Ole Swimmin' Hole," or the "Tank" in the old "Y." The thrill of the splash! The fun of being in the midst of that wriggling, diving, splashing bunch of humanity! It was great fun and it brought with it a sense of mastery and achievement that made it a real joy.

Swimming is a fine all-round exercise. Because the body lies flat the heart does not have to work as hard to pump the blood as when the body is standing up. It tones up the nerves and muscles, and because of the yielding surface there are no bumps or bruises. The work is evenly distributed, so that there is little danger of strain. The poisons which result from the breaking down of the muscle cells are thrown out through the pores of the skin and washed away.

But swimming is fine, not alone because it is the best fun ever, and makes strong bodies, and washes away dirt and poisons. It is so important that a number of schools and colleges consider it a necessary part of a boy's education. Education, you know, is not just learning a lot of facts. Education is learning how to live. To live right one must have will power, self-reliance, and courage. Swimming teaches all three. But to live right one must add to will power, self-reliance, and courage the willingness to serve.

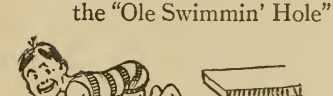
In the great World War the waste in man power was terrible, but few boys realize that in peace times there are enough people who drown every two months to man a large battleship. In the United States and Canada alone each year more than twenty thousand people lose their lives in preventable drowning accidents.

It is because we are accustomed to this terrible waste of life and so few are prepared to help that we go about thinking little and caring less about its prevention.

Every boy should learn to swim because:

1. It is the duty of every American boy to be prepared to save his own life and the life of others.
2. It is the best known form of physical exercise.
3. It is great fun.

But dog-paddling around in a "crick" or pond does not always make good swimmers. In fact, bad swimming habits learned in the "Ole Swimmin' Hole" stick through life, and lots of real fun is lost because the swimmer tires easily and cannot seem to do the crawl, breast, and other strokes as others do them. He has not learned the A B C and arithmetic of swimming. It is as easy to learn to swim as "falling into the water." If a boy has strength enough to stand, is possessed of an average amount of brains, and can get to where there is enough water to float him, he can learn to swim. In fact, it is possible to learn the most important things about swimming with only a washbasin of water and room to fling the arms and legs around. Swimming is hard only as it is made so. Success depends upon oneself and the attitude taken toward the water. There is only one real reason why any person cannot swim, and that is F-E-A-R, Fear. In very young children this condition does not exist, but the average person, who though he has had the opportunity yet cannot swim, is unable to do so because at some time in his life he has been shocked or frightened either by being "ducked" or splashed, by being pushed or by falling into the water, or by hearing, reading about, or actually having a part in a boating or drowning accident.



Five Laws of Swimming

In learning to swim, dive, and save life there are five things to remember. Five. Count them on the thumb and fingers of your hand: (1) confidence; (2) breathing; (3) balance; (4) relaxation; (5) coordination; and the greatest of these is confidence. When confidence comes in, "Old Man Fear" goes out, and with this nuisance out of the way the rest is easy. One of the things that will help in gaining confidence is to realize that for the time being the beginner is going into a new element, the home of Mr. and Mrs. Fish, and must therefore learn to "feel at home" in the home of the fish, and pay them and their home all the respect that is ordinarily given to one's human friends. It will also help create confidence to know that, like the fish, you cannot sink or drown provided your lungs are kept full of air. This sounds silly, but think it over. Another thing to remember in learning to feel "at home in the water" is that familiarity breeds "content," and when contented one is at ease and relaxed.

The Easiest and Best Stroke to Learn

Many instructors have evolved many systems, but one of the best, because both scientific and natural and therefore easy, and because it has brought remarkable results, is the one here given. It is so easy and natural that any boy can learn it. A year ago at a summer camp a boy of fifteen who, through an accident, had had his leg cut off at the hip, learned within ten minutes to swim twenty-five feet. The beauty of it is that the movements can be learned by means of a land drill without much effort. The timing and movements of the arms and legs closely resemble the dog paddle or primitive man's natural stroke. It is interesting to note this style of swimming shown on old Assyrian monuments many years before Christ. After this fundamental crawl stroke is mastered and a boy



has learned to feel "at home in the water," the breast, back, crawl, and side strokes can be learned.

Breathing

The beginner should go into the water about waist deep and, if learning in a large body of water, always face the shore or teacher. Now to learn how to breathe—for remember that in entering the home of the fish the swimmer must adapt himself to a new home or environment. He must breathe as the fish do. In the majority of swimming strokes the head is held face down in the water, the air being gasped in through the mouth as the head is turned sideways up, and breathed out through the nostrils as the head is turned face down. The reason for this is that the swimmer can in a given space of time get more air into the lungs through the mouth than through the nose. Also, if the water was inhaled through the nose it would irritate the lining of the nasal cavity. To learn to breathe properly, place hands on knees, turn the head sideways up, and through the mouth gulp or gasp the lungs full of air. Then turn the head face down and blow the air out through the nose. Repeat this on two counts, keeping the rhythm as in music, one, two, one, two, etc., gradually bringing the face near and finally into the water until able to breathe out against the water resistance. Never forcibly submerge the face and body. This is likely to make the body rigid. This is wrong, as relaxation is absolutely necessary if one is to feel "at home in the home of the fish." Step two, then, is to learn to have the face in the water, first with eyes closed, and then open. Stand as before with hands on knees, turn head sideways up, gulp lungs full of air, then place the head gently in the water face down, hold it in this position for a few seconds, and then as



gently remove head, face down, from water. As the face leaves the water open the mouth wide. Do this to allow the few drops of water which have been forced up through the nose into the head cavities to flow out of the mouth rather than down into the stomach, causing nausea and fear. This is important; remember it.

It will help in developing confidence if the beginner will open his eyes after placing the face in water and try to count pebbles held in the hand or to count the extended fingers. This distracts the attention from any unpleasantness and introduces an element of interest.

Balance

As the greater part of our working hours is spent in an upright or vertical position or plane, we have through the years developed certain habits of balance and have trained our muscles, bones, and nerves to hold the body up straight. Now since the beginner is trying to learn how to act, breathe, and move like a fish, he must learn to move in the home of the fish not standing but lying down. In other words, he must form new habits of balance, for no fish other than the horse-fish swims standing up on end.

To learn to balance, the beginner will imitate a floating turtle. This is done usually after the first trial and really marks an important step in learning to swim, for once the sensation of balance and floating flashes on the mind of the beginner, progress is rapid. In water up to the chest, with the hands on knees, bend the knees until water reaches the chin. Then turn the head sideways up, gulp a lungful of air, turn the head, chin down on chest, reach hands down, and grasp shins halfway between knees and ankles and pull knees up tight to the chest. The feet will leave the bottom and the body will float in a fine example of a turtle. It will not sink. To return, release grasp, drop feet to bottom, raise head, face down, open mouth and eyes, but do not straighten body until water is out of mouth. Because the human body weighs almost the same as an equal body of water and therefore weighs practically nothing in the water, and because it is held up by about two hundred cubic inches of air contained in the lungs, it is impossible for the body to sink. Try it, push a person imitating a floating turtle to the

bottom and immediately he will return to the surface and remain so until the air is exhaled from the lungs.

Relaxation

Further to develop balance and bring about relaxation, imitate a jellyfish by taking a coasting plunge as follows:

Bend knees until water reaches the chin, turn head sideways up and gasp lungs full of air, then turn head face down between extended arms, get a good purchase with the feet on the bottom or, if in an indoor pool, with one foot against the side, push off face down, arms extended in front with wrists hanging down and limp, let legs trail along slightly spread. If in clear water keep the eyes open. This will help him to know he is actually moving ahead and will of course increase his confidence. In this coasting or floating plunge the natural buoyancy of the body is very noticeable. As soon as the momentum stops and the legs begin to drop, draw the knees up to the chest and then drop them to the bottom, at the same time sweeping the arms sideways until wide apart, then with a swift movement bring them together with palms of hands facing. As the hands are brought together, forcing a wedge of water away from the body, raise the head, but keep the face down with mouth open to allow water to escape. Remember this is the proper way to regain your balance, for every movement helps to place the beginner in a standing position. Try and overcome the tendency to rub the water from the eyes as it tends to make the body rigid. Our aim, you know, is relaxation, and with relaxation comes confidence. Do not hurry—take plenty of time in all the movements. The beginner now has splendid confidence.

He has learned:

1. That the water is his friend and that he actually feels at home in the home of the fish.

2. That he positively will not sink so long as his body is relaxed and his lungs kept full of air.

3. That given a push his body will float in the direction of the push.

4. That if he wants to regain his balance he just stands up, pushing back against the water with his hands.

5. That he will not feel "sick to his stomach" if on taking his head out of the water he holds his face down and opens his mouth.

Our swimmer now has confidence, knows how to breathe, has acquired a new sense of balance and knows how to relax. What has seemed the most difficult thing in the world is now as "easy as pie" and all that remains is to teach his legs and arms to work together, or coordinate (Fig. 1).

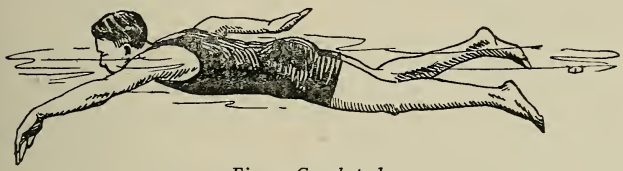


Fig. 1. Crawl stroke

Coordination—Leg Movements

Coordination, then, is the last step. A fish, frog, motor boat, or a human fish is actually kicked through the water. The fins of the fish and the arms of the human help in getting this result. To learn this leg kick, lie down in the water, facing shore, with the hands or elbows resting on the bottom, or if in an indoor pool, lie over the edge with the feet in the water or lie over a stool or chair with hands resting on the floor, keeping the chest and knees on the same level. Kick the feet alternately up and down with little or no hip motion. The feet are moved about six inches up and down with the toes turned in and the feet kept only a few inches apart, the major action being centered in the knees. Any flexing or bringing of the thigh forward stops progress. Therefore make a slow, easy, alternate up, back, and down movement of the leg and foot. Do not hurry, take your time. Hurry makes the muscles tired and rigid and leads to shortness of breath. When able to do this elementary scissor kick return to water about chest deep, face the shore, take a deep breath as described, and with head face down between the extended arms give a strong push from the bottom or side of pool. As the body glides forward, start the kicking or scissor

movements of the feet and legs. Keep this up until necessary to breathe, then regain the balance as described. Do not reach or push down with the hands, for a body in the water will always follow the direction of the hands and arms and instead of regaining one's balance the body will sink head first. If the water is clear and the eyes kept open the beginner will realize with joy that he is now making headway under his own power. He is swimming, for swimming is the ability to move in the water in a definite direction.

Arm Movements

Now for the arm or paddling movements. In water about waist deep (this exercise may also be done as a land drill), stand with feet well braced, one in front of the other, and bend the body at the waist until the chest is about on a level with the surface of the water, the left arm extended front with the palm turned down and the wrist slightly bent, the right arm extended back with the palm turned up. Now with a rolling movement of the body imitate a windmill, keeping the arms the same relative distance apart, one hand gripping and pulling as the other leaves the water. After this movement becomes easy return to water chest deep, take a deep breath, as described, and with head face down between the extended arms give a vigorous push with the feet from the bottom or side of the pool and before the momentum of the body stops start the windmill movement of the arms. The legs should trail along relaxed—as the body rolls they will unconsciously move slightly up and down in a rudimentary scissor movement. Keep the legs together and the toes pointed back. In this arm movement do not attempt to move the legs. Let them, like the cow's tail, "trail behind." Keep the fingers together so that the hand is cupped and resembles the blade of a spoon oar. Be sure that the hand is bent down at the wrist so that the swimmer gets the benefit of the pull as soon as the hand enters the water. As suggested before, it is a good plan to keep the eyes open so as to watch the arms and also the bottom of the pool to see how fast he is moving. Be sure to pull all the time the arm is in the water and that it does not leave the water until it reaches the hip. In other words, do not make the stroke choppy. Again remember to take plenty of time and when out

of breath regain the balances as described. All that remains now to do is to put together or coordinate the leg and arm movements and the swimmer will then feel completely confident and from this point on his expertness and happiness will depend upon practice.

Combined Leg and Arm Movements

Now to complete the mechanics of swimming and put together everything learned about this health-giving, joy-making, character-building sport. After taking a big bite of air, bend the knees and give a good strong push forward and, before the momentum stops, start the leg scissor kick; then after a few kicks begin the windmill movement of the arm. Begin by taking a half-dozen strokes and then add more until able to continue until the breath gives out. As stated before, the swimmer fills his lungs by turning the head sideways and biting off a big chunk of air, exhaling or blowing the air out again through the nose when the head is face down in the water.

Breathing and Stroke

Now to combine the breathing with the stroke. When the swimmer feels compelled to breathe, say after about the sixth stroke, as the right arm leaves the water at the end of the stroke force the air out through the nose, then turn the head sideways up and bite off another lungful of air and as the right hand again enters the water turn the face down into the water. Some swimmers find it easier to turn the head to the left. In this case breathe as the left arm leaves the water. After the movements and breathing become easier, the leg movement should begin at the hip with a snapping action. The legs should not be held stiff but controlled enough to prevent sloppy action. The number of leg drives for each arm stroke depends upon the build of the swimmer. Find the number best suited and stick to that number.

Artificial Aids

Now a few words about artificial aids or supports in swimming. Any floating devices, such as belts and pulleys, trolleys, poles, and buoys, except in very rare instances, are unnecessary and

very doubtful helps. They serve only to give a false sense of security and actually retard the advance of the learner. Where the coordination is extremely poor, small compact light fabric water wings may be used, but if the suggestions given here are faithfully carried out there will be no need of any artificial support. The use of an artificial support shows that there is not the proper confidence. In this system the swimmer will learn to trust the water as a friend. He knows that if the lungs are full of air and his muscles are relaxed he cannot sink and that it is easy and natural to paddle and kick. If he paddles and kicks his body face down through the water, he offers the least resistance to the water and therefore moves faster than with any other stroke. He is thrilled with the joy of doing. He has gotten self-reliance, health, strength, character; has learned something that may prove to be the means of saving his own or other precious human life; and, finally, he has learned how to teach others to swim—a real service.

Breast Stroke

After having learned to swim by the easiest and most natural method the swimmer should give attention to other strokes which have real value, as, for instance, in life saving, when necessary to dive from the surface or swim under water in giving help to a tired swimmer, the breast stroke is very useful. This is a very complicated stroke but can be mastered easily after having learned to feel "at home in the water," for he can now give all his attention to the movements. Until 1916 this was a very slow, tiresome stroke. It often produced headache and the swimmer could go but a short distance before getting winded and tired. The headache was largely due to having to hold the head back on the shoulders at an unnatural angle in an attempt to keep water from splashing into the mouth. This unnatural position interferes with the proper circulation of the blood in the neck and head and causes congestion. By adding a long glide at the end of the stroke, with the arms and legs extended and the face submerged, a much easier and faster stroke has resulted. It is well in learning the breast stroke to practice it first as a land drill, so that on entering the water the

movements will be mechanical and allow the swimmer to give his whole attention to proper breathing, etc.

Breast Stroke—Leg Movement

Standing Position

1. Raise the left knee, directing it sideways, the heel of the left foot touching the inside of the right knee, toes pointing downward.

2. Straighten and lower the left leg by a backward, downward movement until the big toe of the left foot touches the floor about one pace to the left side.

3. Draw the foot with a snap toward the right foot. Do these three movements several times until they become natural and easy.

Breast Stroke—Arm Movement

Standing Position

In this the position of the hands is important. Hold the fingers close together, thumb against the first fingers, extended straight, the palm of the hand slightly cupped. With the hands in this position extend the arms in front as far as it is possible to reach.

1. Turn the backs of the hands together with the elbows straight; sweep the arms back until they are a little beyond a straight line across the shoulder.

2. Bend the arms and bring them edgewise to the front of the chest so that middle fingers meet, palm down, at a point midway between the chin and breast, elbows close to side ribs.

3. Shoot the hands forward to position.

Breast Stroke—Combined Leg and Arm Movement

Standing Position

Start with the feet together and the arms extended front.

1. Sweep arms back until slightly beyond a line across the shoulders and raise the left or right knee until the heel of the raised foot touches inside of the opposite knee.

2. Bend arms, hands to chest, straighten and lower raised leg to floor, one pace to the side.

3. Shoot hands forward, palms down to position in front and snap extended leg toward other foot. Do this until leg and arms work together smoothly.

These movements may also be practiced lying across a bench, stool, or chair—the arm movements as above described, the leg and combined movements as follows:

Leg Movements

Lie face down across bench, legs straight.

1. Draw up both legs, spread the knees and bring the feet together, big toes touching.
2. Extend both legs sideward and out wide apart.
3. Snap the legs and thighs together to starting position.

Combined Leg and Arm Movement

Lie across bench with legs and arms extended, feet together, palms down.

1. Turn hands back to back and sweep arms back to slightly beyond a line through shoulders, at the same time drawing up the legs with knees spread and feet together.
2. Bring hands to chest and extend legs sideward, out, and wide apart.
3. Shoot hands to position in front, palms down, and snap legs together, finishing the stroke.

Breast Stroke in the Water

After the swimmer has learned the movements of the breast stroke, enter the water breast deep. Take a deep breath through the mouth, bend the knees, give a vigorous push off, face down so that the water is just below the eyes, body floating with legs and arms extended. Before the momentum stops sweep the arms back to just beyond the shoulders and draw the legs up, knees spread, feet together. Then as the hands are brought to the chest, extend and spread the legs wide apart. The stroke is finished by shooting the hands ahead and whipping the legs together with a snap. At this point the body relaxed glides forward, the air being blown out through the nose. When ready for the next stroke, raise the head forward, bite off a chunk of air, lower the head, and repeat movements as above. If desired, this stroke may be executed without having the face in the water,

but because of the neck strain the swimmer is likely to tire much more quickly.

Back Stroke

There are several kinds of back strokes and the swimmer should know how to do each of them. This stroke is not only essential in life saving but is useful in getting out of weeds and eel grass; also, when tired, a change to the back stroke will quickly rest the swimmer. This stroke can be learned as a land drill.

Underarm Back Stroke—Land Drill

Underarm Back Stroke—Leg Movement

Lie on back on the floor or on a long bench.

1. Draw up legs, knees spread, feet together.
2. Extend and spread the legs wide apart.
3. Whip or squeeze the legs together with a snap.

Underarm Back Stroke

Arm Movement

Start with the hands at sides of thighs, palms in.

1. Draw arms up, elbows close to ribs, hands on chest.
2. Extend the arms wide apart.
3. Sweep the arms, elbows straight down to the thighs as in the starting position.

Combined Leg and Arm Movements

1. Draw legs up, knees spread, feet together. At the same time raise the arms, elbows to ribs, hands to chest.
2. Extend and spread the legs wide apart and shoot arms out sideways on a line with the shoulders, thumbs up.
3. Whip the legs together and sweep the arms, elbows straight, down against the thighs.

Underarm Back Stroke in the Water

In water breast deep, bend the knees and with head held back and arms loosely held, take a deep breath and give a vigoous push slightly up and back. Allow the body to float for a moment on the back, then do the movements as described under the land drill combined leg and arm movements. Exhale through the nose at the end of the stroke. Inhale through the mouth as the

stroke begins. It is a good plan to practice swimming with different leg and arm combinations. For making rescues this stroke is indispensable. For speed and long distance events the back crawl and back double overarm strokes are used.

Treading Water

Very often in making rescues it is necessary to use both hands in turning the person on his back. To do this allow the feet to sink until the body is upright, then with a loose knee action move the feet and legs as if riding a bicycle. This will be found to be a very useful stunt.

Sculling

Sculling is moving forward or backward, face down or on the back, using a wrist, forearm, and shoulder movement only.

Head First on Back

To scull head first, on the back, drop the head slightly back, with the hands and arms at the sides, hands bent up at the wrist. Work the hands with a short side-to-side sweep and push, much as a Venetian gondolier or a dory fisherman uses his single oar.

Feet First on Back

Same position, except that the hands are bent down at the wrist and pulling with the side-to-side movement instead of pushing.

Feet First on Face

With arms extended, elbows straight, hands bent up at the wrist, wave hands from side to side, and push as described in "Head First on Back."

Diving

Swimming without knowing how to dive is like eating griddle cakes without syrup.

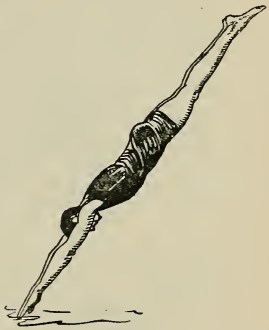
Really to enjoy the water and be thoroughly equipped for life saving every boy should be able at least to do the simple dives. At Futtepore, India, the Hindu boys jump from the old temple ruins, sometimes as high as eighty feet, into a deep well. The

jump is made feet first, right hand holding the nose, the left hand held close to the body.

Diving was introduced into England by the Swedes and was used only in a business way. They, like the Hindus, were skilful in high diving. The pearl divers of the Persian Gulf and around Ceylon can go to great depths, but the Americans were the first to take the honors in fancy diving.

The things needed in good diving are confidence, coordination or body-control, balance, the ability to think and act quickly, and patience. Many make the mistake of attempting the hard dives before learning the simple front or forward dive. As shown elsewhere, "Old Man Fear" must first be "licked to a finish." This can be done in the following manner:

First, jump feet foremost from the edge of the pool. After one or two trials, have the pupil crouch with knees bent, hands extended, thumbs locked and, with the head kept between the arms, fall forward into the water. Repeat this exercise with a springing movement of the legs, the body entering the water at an angle of about forty-five degrees. The tendency, for the beginner, is to lift the head and straighten the body as it nears the water, executing what is technically known as a "belly-whopper." This can be overcome by inclining the head forward between the extended arms.

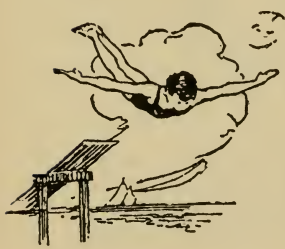


Front dive

Arthur McAleen, of the N. Y. A. C., a title holder and authority on diving, says: "In every dive, plain or fancy, straight or twisting, the head is the controlling factor, for its weight and position give it the power to direct the entire body while in flight. Not only may the angle of ascent or descent be altered by moving it up or down, right or left, but a vigorous motion is almost sufficient in itself to enable the diver to perform any desired stunt in mid-air, be it somersault or a twist. This should be remembered for it really is the secret of success in fancy diving."

After the beginner has developed sufficient confidence to dive from the water's edge, he may then be instructed to practice

the plain front or forward dive from a height. To execute the front or forward dive properly, take the following position at the edge of the diving board or take-off: head up, chin in, chest out, hips back, feet together, toes just over and gripping the end of the board. Place hands on thighs just below the hips, raise high on toes, balance the body momentarily in this position, then slightly bend the knees and leap or spring up and out with head up and back arched, showing a slightly concaved line from the back of the head to the heels of the feet, the legs straight, feet extended, and toes pointed back. As the body begins to fall, the head is dropped, the arms are extended and, with fingers closed and thumbs locked, the body assumes very nearly a straight line and enters, or should enter, the water at an angle of about ninety degrees. The mistakes usually made are keeping the head up and landing flat on the chest or bending the head too quickly, which results in throwing the body over and striking the water with the back of the thighs or legs. The standing dive should be mastered before attempting the running forward or front dive. The running front dive is required in competition. The position of the hands and head is important in determining the depth of the dive. The head bent forward on the chest and hands bent sharply downward at the wrist will cause the body to descend. The raising of the head and hands sends the body to the surface.



The "run" should be a short one—three or four steps—alighting with all possible force with both feet on the extreme end of the board. In the running forward spring backward dive ("salmon," "comeback," "Dutchman") the take-off is made from one foot.

The various forward combination dives, known as the "swan," "swallow," "butterfly," etc., are now classed as plain forward dives. The development of the backward dive is the same as the forward. First, stand on the take-off with the back to the water and jump off backward, feet foremost, into the water. Next, take the fundamental position as described in the forward dive, but with the hands extended overhead, palms front, thumbs

locked, and back toward the water. Bend backward as though trying to touch the water; allow the knees to bend, keeping the head held back and between the arms, and push off. After a few trials, again take the position with hands below thighs and, with a quick up-heaving movement of the arms, head, and chest, leap or spring up and out and, as the body falls, bring hands together thumbs locked, the body entering the water in as straight a line as possible.

The remaining two dives, which complete the standard dives, are known as the "jackknives"—so named because while the body is in the air bent forward, with feet and hands touching, the legs are brought back into a line with the body, imitating closely the sudden opening of a knife blade.



Front jackknife.



Back jackknife.

The forward or front jackknife dive may be executed either standing or with a run. A preliminary exercise of bending forward, touching the toes, and then suddenly bringing the body into an erect position, hands overhead, is an excellent one and should be practiced before attempting the dive.

Assume the fundamental position, then bend the knees slightly, leap up and out, but be careful not to land more than six feet from the end of the springboard as this is the distance

within which the body must enter the water. When the body in its upward spring reaches its highest point, it must bend quickly at the hips, touching toes, and, as it descends, the legs are snapped back and upward, feet together and toes pointed as in all head foremost dives. The head should be held between the extended arms, hands and fingers extended and thumbs locked, the falling body presenting the least resistance possible to the water. The speed acquired in the running front or forward jackknife is quite apt to take the diver beyond the six-foot limit; therefore the emphasis should be placed, not so much upon the run, as upon the jump down upon the board for the upward spring. The backward jackknife is the most difficult of the standard or set dives. Begin by taking the position as in the back dive, then jump backward, feet foremost. After a trial or two the pupil, in position with arms extended to the front horizontal, palms down, and thumbs locked, should spring up and far enough back to clear the board in the descent. The rest of the dive is the same as the forward jackknife.

LIFE SAVING

Having learned to swim by this method any boy is now able to do four things. First, he is able to help people who are drowning, and can save his own life. Second, he can develop a strong, clean, supple body. Third, he can have more real fun and recreation than the fellow who cannot swim. But best of all he can prevent drowning accidents and make others happy by teaching the "other fellow" to swim.

Now to learn the easiest, quickest, and best way to help anyone in danger in the water.

The Approach

As in learning to swim, confidence is the key to success.

If possible to slip off coat, pants, and shoes, do so. If not, as in the case of a person falling from steamer or boat, the rescuer, in order to be close to the victim, will save time by jumping in immediately and taking off his clothes while in the water. If the coat sticks, button tightly. Do not take off coat if wearing suspenders and no vest. The suspenders will cause trouble by sliding down.

If entering the water from the beach, run in knee-deep and then take a long dive and swim with an easy stroke, keeping the drowning person in sight, if possible. Where there are weeds, go slowly in the direction of the stream. If caught in grass, scull out; use hands only. If making the rescue from a height where the depth of the water is unknown, it is best to drop feet first.

In approaching the drowning person or persons speak quietly but firmly. If more than one is in danger, take the one in greatest distress. The object is to get the drowning person in some position for towing. The best position is on the back so that the person cannot grasp the rescuer. The different holds and their breaks, which will be described, should be practiced on land and in the water.

It is best to get behind the drowning person, but if not possible, reach out and grasp the nearest hand—keeping out of his clutches—tread water and pull straight to you, throwing the victim on the back in a floating position. Sometimes it may be necessary to dive under the person so as to grasp him from the rear. If an attempt is made to grasp the rescuer, stay away—let him fight the water.

Wrist Hold

If grasped by a drowning person, the grip most likely to be taken is the hold on the rescuer's wrists, thumbs up. This is easy to break by suddenly raising the arms, elbows out, then

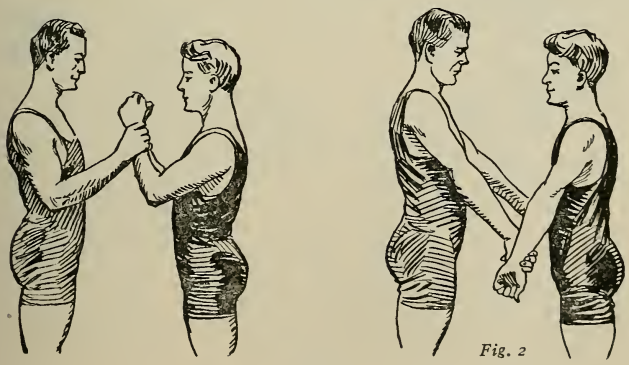


Fig. 2

quickly thrust hands in, down, and out (Fig. 2). The pressure against the drowning person's thumbs breaks the hold. In breaking away immediately grasp the person's wrist and turn him around on the back ready to tow. Do this in all breaks.

Neck Hold, Both Arms Front

Place right hand against person's right lower jaw and nose, left hand under his right elbow (Fig. 3). With a quick push against face, lift under elbow, and turn him on his back ready to carry; or, if necessary, raise elbows, hands down, fists closed, with thumbs straight and held stiff against close-clenched index finger, and jab thumbs down against person's lower ribs.



Fig. 3

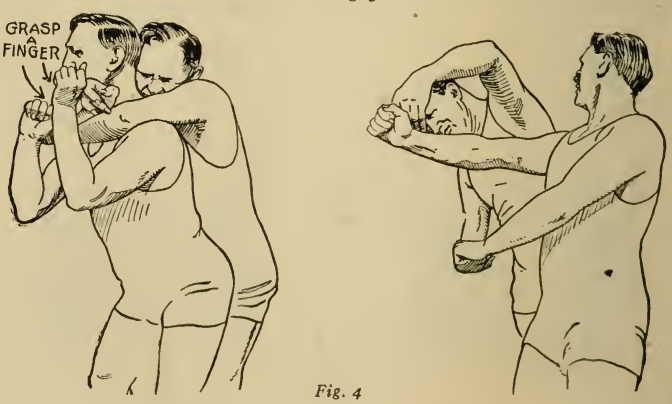


Fig. 4

Strangle Hold, Rear

Raise arms crossed, right over left. With right hand grasp person's right little finger. With left hand grab person's left little finger. With a quick jerk and bump back with buttocks pull person's arms wide apart and get behind and carry (Fig. 4).

Shoulder Hold, Front

Throw arms, elbows straight, sideways up and overhead, at the same time that you sink down, grasp right arm and get behind him, swim on back and carry him in floating position by two-hand hold.

Shoulder Hold, Rear

Throw arms sideways up overhead, duck, grab person, and swim as above. It is well to note that the thumb counter, *i. e.*, jabbing stiff thumbs against lower ribs, is very effective. Be careful in practice. Always follow a release by towing.

Towing a Person

Towing a person, of course, is not so dangerous as having to break the holds. One of the very easy methods is to grasp the person by the hair or clothing with one hand, towing him on the back, with one arm and kick for propulsion.

Head Carry

After a person is turned on back, tow by placing the hands over his ears, fingers extended down along the lower jaw, the head tilted slightly back (Fig. 5). Keep the water out of the ears—it helps to restore confidence.

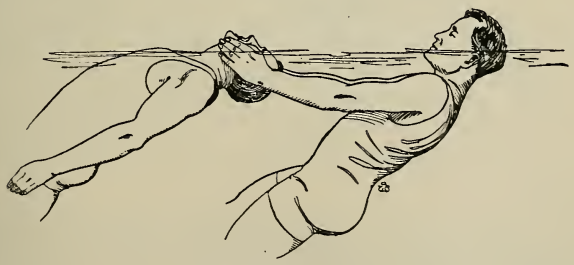


Fig. 5. Head Carry

Underarm Carry

When on back place the heels of the hands alongside the body in the armpits, the fingers extended (Fig. 6).

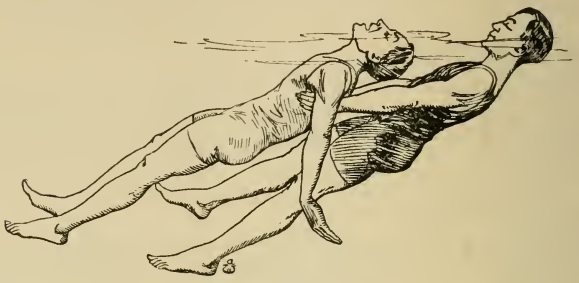


Fig. 6. Underarm Carry

Sidearm Carry

Turn drowning person on the back, by placing right hand on his right shoulder; left hand under his left arm to turn. Throw his left arm up, over, and across rescuer's left and extend right arm ready for the stroke, the drowning person being well up on the left hip of the rescuer (Fig. 7).

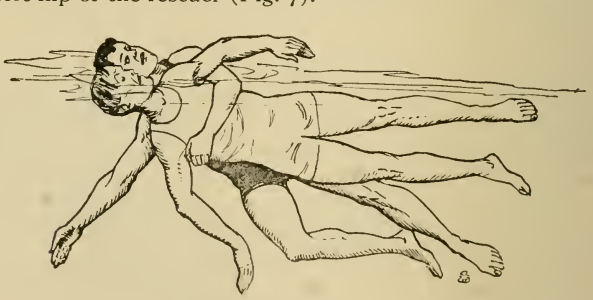


Fig. 7

Arm Carry

Rescuer slides left arm under subject's right arm, grasping arm at the biceps (upper arm), and pushes subject along on his back, lifted into floating position by rescuer's elbow under hip.

How to Help a Tired Swimmer

If swimming with a friend or near a person who gets tired, the tired person should be told to turn on his back and place his hands, arms extended, on the rescuer's shoulders, who swims forward, using the breast stroke. It is possible to carry or push a person a long distance in this manner, provided the rescuer swims easily and does not try to hurry (Fig. 8). Another way is the side-stroke assist or carry. The person to be helped should be behind the rescuer with one hand on his upper shoulder. The one helped can assist by using his free arms and legs. Never do this if the tired one is panicky.

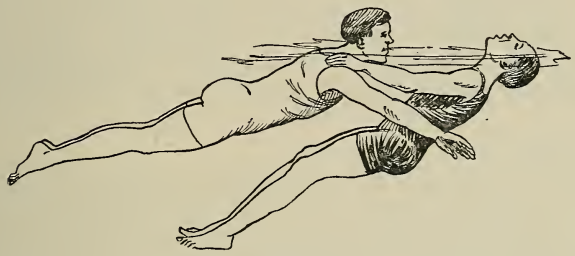


Fig. 8

When a Boat Capsizes

If there are a number of persons in the boat, don't attempt to swim ashore with any except those who have gone down. Direct or help others to side of boat. Tell them they are in no danger and to hold on. Dive for person who went under. If he is unconscious when brought to surface, take him to shore and, if others are present to perform first aid, give directions for Schafer method. Return, and if the boat is not too large, grab painter or rope and tow boat, with persons hanging on, to shore. This is not as difficult as it sounds. If the boat is too large it is better to use anything that may be floating near by, such as an oar or a plank.

Recovering a Body from the Bottom

When a body has recently sunk to the bottom, its location may be known by the air bubbles which will appear on the sur-

face. In still water the bubbles come straight up. In running water they will be slanting in the direction of the current, so that the body will be found higher up the stream than where the bubbles appear. Grasp the body by the hair at back of the head, slack of coat or shirt at the shoulders, or by the armpit. After securing the body, give a vigorous push and swim upwards with a back stroke, and when near surface, change grip to ordinary rescue hold, as described.

To Go to Bottom

Start to swim in a forward motion on the surface, tuck in the chin, throw the legs out of water for weight, and with eyes wide open, take choppy breast strokes to the bottom. Your diving rudder is your head. Keep the hands well advanced to prevent collision with obstructions or bumping into the mud or rocks.

Resuscitation

Death by drowning is due to suffocation and shock, not by water entering the lungs. After opening the bodies of many drowned persons, doctors have seldom found more than a teaspoonful of water in the lungs of each body. The water commonly supposed to come from the lungs really comes from the stomach.

It was not until 1804 that people became interested in life saving. Before that time it was a crime to take an unconscious person out of the water. Up to 1858 many foolish and really cruel methods of resuscitation were used, among them being the blowing of smoke into the intestines to make the body warm. Cutting a blood vessel and letting the blood escape was another. Blowing air into the lungs with a hand bellows was also practiced. Dr. Hall, in 1858, originated a system which was used until several years later. During the Civil War Dr. Sylvester's method was declared a better one, but in recent years this has given way to the Schafer, or "face down method." This is the method recommended and which will be described (Fig. 9).

The next thing to do after getting the person to shore and stopping any arterial bleeding, is to send or telephone for a doctor, briefly describing the accident. If others are present

have them do this. If alone and not near a telephone, go ahead quickly as follows:

After getting the unconscious person ashore on a flat surface, lay him face downward, arms extended above the shoulder level. Using the forefinger, clean any sand, dirt, grass, or mucus from the person's mouth. Pull the tongue forward. In this position fluids will drain from the mouth.



Fig. 9

Artificial Breathing

If on a shelving beach, remember to lay the person with head toward the water. Place flat on chest. If coat, towel, or anything which will serve as a roll is handy, place just below the chest. Turn the person's head to the left, resting on back of right hand, face and hand pointing in the same direction. The person's left arm is extended above the shoulder level.

Be sure that the tongue is forward and then kneel astride the person so that the knees will be at his hips. Place the hands on the person's back, the thumbs held against index fingers. With the fingers pointing down over the lower ribs, lean forward and steadily press downwards, as you slowly say *"Out goes the water."* Then suddenly release the pressure without taking the hands wholly from the body, and rest as you say, *"In comes the air."* Repeat this forward and backward movement twelve times a minute, until natural breathing is restored. This may take an hour or more, but don't give up. Keep at it. Persons have been brought back to consciousness after four hours of hard work on the part of the rescuer. Remember that apparently drowned persons who have been under water five or ten minutes

have been resuscitated after the use of this method. So don't get discouraged. Don't give up. To discover signs of returning consciousness lift eyelids. If the dark spot (pupil) in the eye gets smaller when exposed to the light there is still life in the body.

Keep up the respiration movements until the person begins to breathe. The legs and arms should be rubbed briskly toward the heart. This will help restore the circulation. Cover well with blankets, placing well-protected hot bottles, bricks, or water bags at the feet, pit of stomach, and under the armpits.

Give hot drinks after person begins to breathe and not until then.

Give no whiskey or alcoholic stimulant except when ordered to do so by a doctor.

Give the person plenty of air and quiet, and the recovery will be rapid.

Young Men's Christian Association, A. L. N. A.
National Swimming Records, 1919

Event	*Time or Distance*	*Name*	*Location*	*Date*
20 yd. swim	8 1/5 s.	Clarence Lane	Honolulu, Hawaii	June 24, '16
25 yd. swim	11 4/5 s.	Frank S. Gillman	St. Paul, Minn.	Mar. 18, '16
40 yd. swim	19 4/5 s.	John Kelii	Honolulu, Hawaii	1919
50 yd. swim	24 2/5 s.	Clarence Lane	Honolulu, Hawaii	1919
50 yd. swim, back stroke	30 s.	Harold Kruger	Honolulu, Hawaii	1919
50 yd. swim, breast	34 s.	G. E. Reddall	Brooklyn, N. Y.	Mar. 25, '15
75 yd. swim	39 3/5 s.	Clarence Lane	Honolulu, Hawaii	1919
100 yd. swim	56 4/5 s.	Clarence Lane	Honolulu, Hawaii	1919
100 yd. swim, on back	1 m. 11 s.	Harold Kruger	Honolulu, Hawaii	1919
100 yd. swim, breast	1 m. 18 4/5 s.	William Fox	St. Paul, Minn.	Mar. 24, '16
150 yd. swim, back stroke	1 m. 53 1/5 s.	Harold Kruger	Honolulu, Hawaii	1919
200 yd. swim	2 m. 12 2/5 s.	Duke P. Kahanamoku	Honolulu, Hawaii	1919
200 yd. swim, breast	2 m. 34 3/5 s.	Lawrence F. Snow	Boston, Mass.	Apr. 18, '17
220 yd. swim	2 m. 29 s.	Duke P. Kahanamoku	Honolulu, Hawaii	1919
400 yd. swim	5 m. 55 2/5 s.	Robert Muir	Boston, Mass.	Apr. 18, '17
500 yd. swim	6 m. 13 1/5 s.	Duke P. Kahanamoku	Honolulu, Hawaii	1919
Plunge and underwater	298 ft. 6 in.	Harry Broadman	St. Paul, Minn.	July 1, '16
Plunge and underwater	267 ft.	G. E. Reddall	Brooklyn Bedford	Dec. 17, '14
Underwater swim	240 ft.	C. E. Cooley	Memphis, Tenn.	Dec. 28, '16
50 yd. breast stroke	34 s.	G. E. Reddall	Brooklyn Bedford	Mar. 25, '15
100 yd. breast	1 m. 18 2/5 s.	Robert Muir	Boston, Mass.	Apr. 18, '17

100 yd. breast	1 m. 18 4/5 s.	William Fox	St. Paul, Minn.	Mar. 24, '16
20 yd. on back	12 4/5 s.	R. M. Darnell	Memphis, Tenn.	Oct. 21, '16
100 yd. on back	1 m. 29 s.	B. F. Taber	St. Paul, Minn.	Feb. 20, '15
100 yd. on back	1 m. 13 2/5 s.	Harold Kruger	Honolulu, Hawaii	June 24, '16
Plunge for distance	64 ft.	Carlton P. Schaub	St. Paul, Minn.	Apr. 5, '16
80 yd. relay	42 4/5 s.	R. V. Sims R. M. Darnell D. Boynton E. W. Wood	Memphis, Tenn.	Oct. 21, '16
400 yd. relay	3 m. 53 4/5 s.	Harold Kruger Clarence Lane John Kelii George Cunha	Honolulu, Hawaii	June 24, '16
400 yd. relay	3 m. 44 4/5 s.	Duke P. Kahanamoku George Cunha Clarence Lane Harold Kruger	Honolulu, Hawaii	July 22, '16
500 yd. relay	4 m. 43 3/5 s.	John Kelii Duke P. Kahanamoku Clarence Lane George Cunha Harold Kruger	Honolulu, Hawaii	July 22, '16

World's Swimming Records

	Made in Tank		*Made in Open Water*	
Distance	*Holder*	*Time*	*Holder*	*Time*
50 yds.	D. P. Kahanomoku (A)	23 m. 2/5 s.	D. P. Kahanamoku	23 m.
100 yds.	P. McGillivray (A)	54	D. P. Kahanamoku	53
100 meters	Norman Ross (A)	1.01	D. P. Kahanamoku	1.00 4/5 s.
120 yds.	P. McGillivray (A)	1.08 2/5 s.		
150 yds.	H. E. Vollmer (A)	1.29 4/5 s.	C. Healy (Aus)	1.34
200 yds.	Norman Ross (A)	2.06 4/5 s.		
200 meters	Norman Ross (A)	2.21 3/5 s.		
220 yds.	Norman Ross (A)	2.20 1/5 s.	P. McGillivray (A)	2.21 1/5 s.
300 yds.	Norman Ross (A)	3.16 3/5 s.	B. Kieran (Aus)	3.31 4/5 s.
400 meters	Norman Ross (A)	5.16 2/5 s.	L. Langer (A)	5.17
440 yds.	Norman Ross (A)	5.08 4/5 s.	L. Langer (A)	5.17
500 meters	H. E. Vollmer (A)	6.51 3/5 s.		
500 yds.	Norman Ross (A)	5.53 2/5 s.	L. Langer (A)	6.11 2/5 s.
880 yds.	B. Kieran (Aus)	11.11 3/5 s.	H. Taylor (E)	11.25 2/5 s.
1000 yds.	B. Kieran (Aus)	12.52 2/5 s.	L. Langer (A)	13.07 2/5 s.
1320 yds.	C. M. Daniels (A)	17.45 4/5 s.	W. Longworth (Aus)	17.42
1 mile	B. Kieran (Aus)	23.16 4/5 s.	G. R. Hodgson (C)	23.34 1/2
2 miles	Geo. Read (Aus)	54.54	W. Longworth (Aus)	51.32

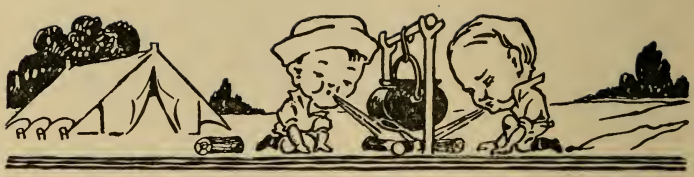
800 ft. (100 ft.)	Yale U.	Mayer Sumners Marr Roberts	2 m. 30 s.	Feb. 27, '14
400 yds. (20)	Yale U.	Mayer Ferguson Rosener Schleat	4 m. 1 2/5 s.	Apr. 23, '16
Back stroke—150 yds. (20)	Chicago U.	C. B. Pavlicek	1 m. 50 2/5 s.	Feb. 22, '16
Breast stroke—200 yds. (20)	Wisconsin U.	Herbert Taylor	2 m. 45 2/5 s.	Mar '15
Plunge for distance 78 ft.	Penn.	Carl G. Lehman	1 m. time limit	Feb. 7, '16
Plunge for speed (60 ft.)	Chicago U.	J. C. Redmond	18 4/5 s.	Feb. 26, '16
100 yds. on back		G. Richard Dungan (A)	1 m. 12 1/5 s.	
150 yds. on back		H. J. Hebner (A)	1 m. 49 3/5 s.	
Breast stroke—200 yds.		M. McDermott (A)	2 m. 38 2/5 s.	
Plunge for distance 82 ft. 7 in.		W. Taylor (E)	1 m. time limit	
106 yds. 2 ft.		E. P. Swatek (A)	55 s.	
Relay—5 men 500 yds.		A. C. Raithel Wm. Vosburgh H. J. Hebner P. McGillivray D. L. Jones	57 2/5 s. 55 s. 55 1/5 s. 58 s.	

National Interscholastic Records

Event	*School*	*Holder*	*Time*	*Date*
800 ft. relay	Poly. Prep., Brooklyn		2 m. 40 s.	Jan. 28, '19
50 yds.	Berkeley-Irving	Leo Giebel	26 1/5 s.	"
100 yds.	Poly. Prep., Brooklyn	Jelliffe	1 m. 2 s.	"
500 yds.	Berkeley-Irving	Leo Giebel	6 m. 48 2/5 s.	"
Fancy diving	Mercersburg	Reid		"
Plunge for distance	Western H. S. (Detroit)	Schuredt	79 ft.	"

National Intercollegiate Records

40 yds. (20)	Chicago U.	W. C. Earle	19 s.	Feb. 21, '16
50 yds. (25)	Yale U.	S. E. Hoadley	25 1/5 s.	Dec. 11, '14
100 yds. (25)	Columbia U.	Herbert Vollmer	56 2/5 s.	Feb. 18, '16
220 yds. (100 ft.)	Princeton U.	Eben Cross	2 m. 31 s.	Feb. 20, '14
440 yds. (20)	Northwestern U.	R. Simonson	5 m. 47 4/5 s.	Mar. 17, '16
Relay—160 yds. (20)	Chicago U.	Earle, Meine, O'Connor, Paviicek	1 m. 20 s.	Feb. 21, '16
200 yards (25)	Yale U.	Ferguson, Schleat, Mayer, Thomas	1m. 42 1/5 s.	Feb. 28, '17



CHAPTER XI

CAMP LIFE AND RECREATION

H. W. Gibson

Section 1. Camping and Campcraft for Boys
Section 2. Kinds of Fire and Their Uses
Section 3. The Sheltering Lean-to
Section 4. What and How to Cook
Section 5. Hikes and Mountain Climbing
Section 6. Knots that Every Boy Should Know

SECTION 1

Camping and Campcraft for Boys

Just as soon as the green begins to creep back into the grass and the buds start to swell, threshing in the blood of a boy also begins to assert itself by a kind of restlessness and a longing for freedom, a desire to get out in the open where the fresh breezes blow, where the air is pure, where there is room and range to stretch, and where he will have relief from the stuffiness of man-made houses. Naturally, the first person to whom he expresses this feeling is his friend and leader. "Let's go camping," says Boy. "All right, let's," replies Man. Then follow hours and days of indescribable delight in planning and of anticipation. "Where shall we go?" is a question more easily asked then answered. Whether the camping trip is for only a week-end or of longer duration, these several things must be carefully considered: the choice of a site where pure water for drinking and swimming is

abundant, where wood and food are easily obtainable, and where there are safe sanitary conditions.

Typhoid is an enemy often found lurking in most attractive looking waters. Not every stream that sparkles is pure. Keep an eye upon the drainage. Make sure that the stream of water or pond is far away from all possible pollution from barnyard and village drainage. Brackish and still pools of water are prolific breeding-places of mosquitoes. Always boil the drinking water, if there is the slightest shadow of a doubt. There is as much need of "safety first" in the matter of drinking water as there is in crossing a city street or a railroad track. Both have "killing" possibilities. War fevers do more damage than bullets. Indians and experienced campers always find pure water and then camp, the "plebes" always camp and then hunt for water. Avoid drinking water rapidly when hot and tired. Drink sparingly and slowly. Insist upon each camper's using his own drinking cup, which should be either the collapsible type or the regular camp variety of white enamel, about four inches in diameter.

"A swimmin' hole" is a necessity as well as a joy, for a camp without swimming facilities would prove a failure. Have it definitely understood, however, that no member of the party is to go into the water except at the stated time and place. This should be a rule as unchangeable as the rules of the Medes and Persians. Always swim before eating and never after eating, unless at least from three to five hours have elapsed. A good time for swimming is around eleven or twelve o'clock in the morning. A good swimmer should patrol the shore and have oversight of the swimmers during the swimming period. Too much swimming, especially in fresh water, accounts for the listlessness and inactivity of many campers. The body gives off heat every minute it is in cool water, and also when exposed wet to the breezes; and heat is life. From twenty to thirty minutes is sufficient time for a fresh-water swim. A dip on rising in the morning will freshen and invigorate, but make sure that it is a dip and not a swim, as the body is not in condition to meet the exertion demanded in swimming. A good rub down with a bath towel will put every boy in the pink of condition and forestall "grouchiness."

In pitching your tents always select high ground where there is natural drainage, so that there will be no need of ditching. If the camp is to be for two weeks or longer, use wall tents, 12 x 14 feet, for sleeping purposes. A tent of this size will accommodate from six to eight persons. For overnight or week-end camps use the "dog" tents or make shacks. A good description of how to make shacks is given in the handbook of the Boy Scouts. In sleeping upon the ground dig a "hip hole," a trench about midway of the bed, spread the rubber poncho upon the ground so that the "hip hole" is in the right place, lie down with a blanket spread over you, roll on your right side and tuck blanket under you, then roll over on your left side and tuck remaining part of the blanket under you, then raise your feet and tuck the bottom of blanket under your feet. Another way is to make a sleeping-bag by folding the blanket lengthwise and pinning the side and bottom with big blanket safety-pins, then crawl inside for a good nine hours' sleep. Always put a rubber poncho or oilcloth or paper on the ground to prevent suffering from dampness. A thatched bed of pine or balsam is both fragrant and restful. When sleeping on a canvas cot or bunk, be sure you have as many blankets under as over you. A common mistake of campers is the "piling" on of blankets to keep warm. Sleep is Nature's greatest restorer, and "rough house" at night should have no place in a camp.



Reveille

Sanitation must be insisted upon. Garbage should be buried or burned, including tin cans, for there is always a small amount of food remaining in the can which will attract flies. Carelessness will cause disagreeable as well as dangerous results. Latrines or toilets should be established far enough away from the camp and where the drainage is safe, and yet within easy reach. Prohibit the pollution of the surface of the ground. Chloride of lime or a solution of Sulpha-Napthol should be used frequently about the toilets, or the excreta covered over with earth This is the old Mosaic rule laid down in Deuteronomy 23:12–14

All food must be protected from flies and exposure to the heat and sun. Dishes and pots and pans should be kept scrupulously clean. Wood ashes or sand soap will do the work when aided by

a generous supply of muscle. Cleanliness first, last, and always, should be insisted upon if health is to be conserved. Have a place for everything and keep everything in its place. Every camper should be assigned a job if the camp is to be cheerful and happy. Shirks and drones always breed discontent.



If the department of the boys' interior is to be in a state of peace and not engaged in rebellion or revolution, it will depend almost entirely upon the "eats." Stomach rebellion is caused by badly cooked food and irrationally balanced meals. Make out the menu before starting for camp and have each meal carefully balanced, so that the proper quantity and division of proteids, fats, and carbo-hydrates necessary for his growth and health is given each boy. This is not "high-brow" advice but common sense, and in the interest of giving boys a physical square deal. Every camp director should secure from the U. S. Department of Agriculture the Farmers' Bulletin No. 142, "Principles of Nutrition and Nutritive Value of Food." Also from the American School of Home Economics, 505 West 69th Street, Chicago, Ill., Bulletin No. 36, "Food Values" (10c) and No. 34, "Five Cent Meals." A very good book is "Camp Cookery" by Horace Kephart.

It is much better to secure a professional cook if the camp is conducted for two weeks or longer. For overnight hikes or week-end camps, meals can be prepared by the boys.

Discipline, tempered with friendliness, is the medium through which every camper is assured of a square deal. Justice is a quality easily recognized by a boy in a *Leader*. Have no favorites. Encourage boys to measure up to their best. Make it hard to do wrong and easy to do right. Self-discipline and self-government must have paternal oversight, if the benefits of democracy are to be safeguarded from the intoxication of full freedom. Hear both sides of every question and of wrongdoing before taking decisive action. A boy when asked why he liked his *Leader* replied, "Because he makes me do things." He admired this kind of service-inspiring leadership.

A camp will best fulfil its purpose when there is a definitely planned daily program, something like the following "order of the day":

A. M.

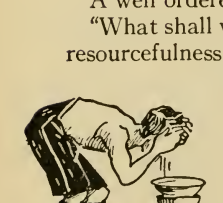
6:30	Reveille, Flag raising
6:40	Setting up or pajama drill
6:50	Dip (5 minutes)
7:15	Breakfast, followed by the announcements and prayers Morning devoted to camp duties, games, instruction, etc.
11:00	Swimming period
11:45	Inspection
12:00	Dinner

P. M.

1:00	"Siesta"
2:00	Games and afternoon sports
5:45	Colors or lowering the flag
6:00	Supper Evening given over to a camp fire, entertainments, story telling, etc.
9:00	Taps. A good nine-hour sleep

A well ordered day usually means a happy day.

"What shall we take?" Well, that depends upon the initiative, resourcefulness, and grit of each camper. The usual tendency is toward taking too many unnecessary things.



The list of cooking utensils should include a good-sized frying pan, a good griddle for making "pancakes," a small-sized washboiler for hot water and in which to cook soup, two round boilers for cocoa and vegetables, two water pails, a dipper, two big stirring spoons, one long-handled fork, two pancake turners, a good can opener and cork screw, one bread knife and a good carving knife, one big dish pan, one eight-quart milk can, two paring knives, two dish towels, four drying towels, salt and pepper shakers, white enamel (Swedish make) plates, cups, saucers,

serving dishes, butter dish, cheap knives, forks (four pronged), spoons. *Do not forget safety matches.* Individual taste and needs will determine what else to add to this list.

The personal outfit should consist of a strong khaki suit like the Boy Scout suit with an extra pair of "shorts," a change of underwear, flannel shirts, extra stockings, sweater, poncho, two army weight blankets, bathing suit, comb and brush, tooth brush and powder, soap in aluminum box, pencil, paper, envelopes, stamps, needles and thread, pins including safety pins, handkerchiefs, pocket knife, Bible, and a good disposition.

Take enough time each day for the development of the soul or spiritual life. Nature is devout and under such environment boys readily respond to the appeal as well as the challenge of the Christian life. Twenty minutes after breakfast or supper spent in discussing personal problems, Christian standards, and methods of service are golden minutes in man-making. Two booklets, "Bible Studies for Boys' Camp" and "Five Minutes a Day" (Association Press) will be found full of suggestions for discussion. "Some Outdoor Prayers," by George A. Miller is a little book, but big with helpful thoughts.

A book like "Camp and Outing Activities" by Cheley and Baker, published by Association Press, will be found of value in planning the "doings" of the camp. "Camping for Boys" is another book which camp leaders have found suggestive and helpful. Best of all, however, is to make a scrapbook of your own. In this paste all articles found in magazines, newspapers, and books on the subject of camping, arranging them in topical order so that in planning for a meal you will be able to turn to the pages on "Food" and find the thing desired. Other topics such as "Games," "Stunts," "Swimming," "Nature Study," and 'Sanitation" will suggest valuable camping hints.

No method of bringing boys close to their *Leader* has yet been devised equal to camping. There is a kind of "togetherness" in living in the open that is not obtainable in man-made houses. A week or week-end spent by *Leader* and boys in this fashion will cement friendships, open up confidences, reveal spiritual longings, and make virile character. For, after all, the real objective of camping is to bring God, through His wonderful works in a very real way and in a natural manner to the boy. Virile Christian

character is made through the camping process in a way known only to those who have tried it out.

Note

For more extensive treatment of this material, see books listed on page 301.

SECTION 2

Kinds of Fire and Their Uses

One of the important things about camping is a campfire. There are two kinds of campfires, the "warming up" fire, and the "cooking" fire. Of course there are others, such as the "smudge" to drive away mosquitoes, and the "friendship"—the kind you just like to sit around and talk or silently watch the flames shape themselves into fantastic forms. The most useful since man discovered fire is the cooking fire—flames for the pot and coal for the pan.

Select a sheltered and safe place to build your cooking fire, where no wind can blow it out or into the surrounding dry brush, ascertain the direction of the wind, and then build your fire so that the smoke will not blow into your face when you are doing the cooking. Next in importance is the wood. Certain kinds of wood, such as hickory, oak, beech, birch, hard maple, ash, elm, locust, longleaf pine, and cherry, have fairly high heat values, and laboratory tests show that one cord of seasoned wood of these species is equal to one ton of good coal. Short leaf maple, hemlock, sycamore, cedar, poplar, Norway pine, cypress, basswood, spruce, and white pine, have a comparatively low heat value. These woods ignite readily and give out a quick hot flame, but one that soon dies down. The principal disadvantage of the resinous pines is their oily black smoke.

The woodsmen of British Columbia have a wood-chopping trick that keeps nicks out of the axe blade. When chopping the wood, instead of laying it on a block or on the ground where you have a chance to miss and put a nice nick in your axe, just stand it on end, holding it with the left hand at a convenient angle and strike a glancing blow into it, turning the branch till you have

gone all the way round. It will then break with a blow from the head of the axe and you have a nice feathery end to catch fire easily (Fig. 1).

Woodcraft boys make what are called "fuzz-sticks" or "fire-lighters," by taking a dry, resinous stick about an inch thick and shaving it with a good sharp jackknife into thin slivers, which remain on the stick (Fig. 2). Three or four of the "fuzz-sticks" will insure the starting of a fire.

Gather dry twigs and dead branches and plenty of birch tinder. When the wood has been gathered and prepared, you are ready to begin building the fire. Time is saved by having everything on hand and within reach. Haste always wastes time in making a cooking fire.

The simplest and handiest all-round cooking fire is that made of two green logs laid parallel on the ground. Level off the top with an axe. Place them a few inches apart, so that a frying pan or coffee pot can rest upon both. Between the logs scrape a trench about six inches deep (Fig. 3). In placing the wood in the trench, pile it in such a way that allows plenty of air space. Place several "fuzz-sticks" first, then dry twigs, and keep adding heavier wood as the fire progresses. When it is blazing well, start your water boiling. For broiling, or frying, or baking, scrape the hot ashes and live coals evenly, and you will have a wonderful fire for such purposes. Never add more fuel just before putting on your stuff to cook. Avoid too big a fire. Remember that you do not cook with flames, but with hot coals, which give a greater heat and one that is steady. Never use soft wood if you can get hard wood. Soft wood is smoky, covers the food with flaky soot, and produces a ruffled temper. A windbreak or fender will add to the convenience during chilly or windy weather (Fig. 4).

A simple camp-fire crane that may be used in connection with any kind of an open fire is shown in Fig. 5. Cut sapling of hard wood about three inches in thickness. Drive sapling firmly into ground.

A common method of building a cooking fire is to take flat stones and put them together in a sort of fireplace. Grates may also be purchased for outdoor cooking. Toasted bread just reaches the right spot. A useful toaster can be made from flexible



Fig. 1



Fig. 2



Fig. 3

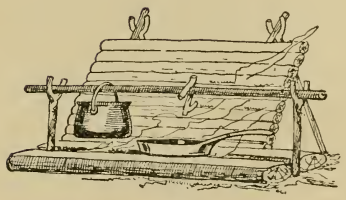


Fig. 4

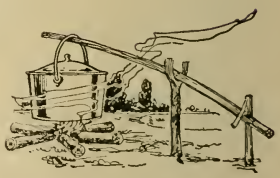


Fig. 5



Fig. 6



Fig. 7

withes bent and tied in the shape shown in Fig. 6. Bread will toast better when placed before glowing embers. Turn the bread frequently.

"Friendship" camp fires are usually built so big that you cannot get near enough to enjoy the friendship of the fire. To waste wood is just as unpatriotic as to waste food. A comfortable, sociable, and economical camp fire is the one used at the Council Circle of the Woodcraft League. It is built square and about two and one half feet high, the bottom stick about three feet long; the rest shorter and smaller. Fuzz-sticks, chips, and small wood to light it can be put either under or on top of the second layer. It should be drawn in toward the top, so as to burn without falling apart. Use dry, seasoned wood so that a bright blaze is secured and maintained (Fig. 7).

Making Fire without Matches [1]

There are three distinct ways of building a fire without matches. The simplest, but most difficult, is by the rubbing of two sticks or hand drills together; the second, by use of a bow drill, which is an improvement over the first, in that it gives a more rapid movement and increases the friction; and, third, by the use of flint and steel. Every good camper should be able to accomplish all three, and by all odds the last two.

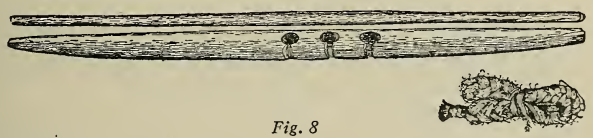


Fig. 8

Fig. 8 is a good illustration of the simplest sort of fire drill, one used by the Indians of Washington and the Northwest. Following is a description of the set, quoted by special permission from the Smithsonian Report, "Firemaking Apparatus in the United States National Museum," by Dr. Walter Hough:

"It consists of a hearth, two drills, and a slow match. The hearth is a rounded piece of cedar wood; opposite the fire-holes

[1] Reprinted by permission from "Camp and Outing Activities," by F. H. Cheley and G. Cornelius Baker, copyright, 1915, by the International Committee of Young Men's Christian Associations.

it is dressed flat, so as to rest firmly on the ground. There are three fire-holes with wide notches. The drills taper to each end, that is, are larger in the middle (Fig. 8). The powder, a fine brown dust, collects at the junction of the slot and fire-hole, where they form a lip, and there readily ignites. This side of the hearth is semi-decayed. No doubt the slots were cut in that side for the purpose of utilizing this quality. The drills are bulged toward the middle, thereby rendering it possible to give great pressure and at the same time rapid rotation without allowing the hands to slip down too rapidly, a fault in many fire drills. The slow-match is of frayed cedar bark, about a yard long, folded squarely together, and used section by section. Mr. Willoughby says:

"'The stick with three cavities was placed upon the ground, the Indian kneeling and placing a knee upon each end. He placed one end of the smaller stick in one of the cavities, and, holding the other end between the palms of his hands, kept up a rapid, half-rotary motion, causing an amount of friction sufficient to produce fire. With this he lighted the end of the braided slow-match of cedar bark. This was often carried for weeks thus ignited and held carefully beneath the blanket to protect it from wind and rain.'

"Fire is easily produced with this set. It takes but a slight effort to cause a wreath of aromatic smoke to curl up, and the friction easily grinds off a dark powder, which collects between the edges of the slot. When this ignites it drops down the slot in a little pellet, and falls upon the tinder placed below to receive it. Both drill and hearth are eighteen inches long."

Fig. 9 shows a second set, reproduced from the same book, and shows the method the Indians used to keep the precious

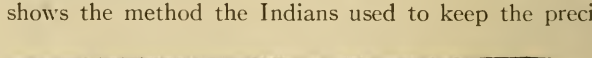


Fig. 9

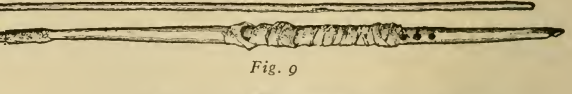


Fig. 10

hearth dry. The entire length is carefully wrapped with a strip of taut buckskin.

Fig. 10 also from Dr. Hough's report on "Firemaking Apparatus in the United States National Museum," shows an interesting feature. The handle by which the hearth is fastened to the Indian's belt also shows the spliced drill, the hardwood point spliced into a favorite or especially desirable handle.

Probably when the simple hand drill was used, the grinding of the powder was facilitated by adding a small pinch of fine sand to the bowl of the hearth.

The next method is that of intensifying the friction by means of using the bow drill. This is the more common method, and is found in general use, from the Indians of Alaska—who use bone instruments, except the hearth, which is usually white pine—to the Indians of South America. The principal law, however, is the same in all; only the material used changes with the locality. See Fig. 11.

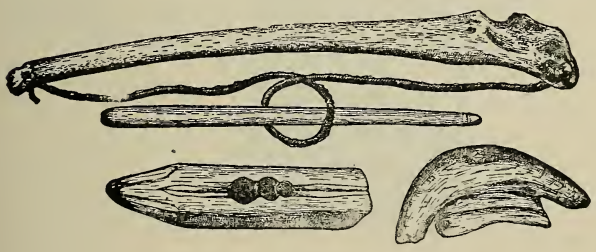


Fig. 11

Ernest Thompson Seton, the master of woodcraft, declares that the best results are obtainable by having the hearth and the drill of the same material. But others are not so agreed. There is one thing certain, however: the wood used must not be too hard nor too soft, but hard enough to make very fine brown grindings, and soft enough to make a sufficient quantity to hold the spark. The tinder and carefully prepared pile of slivers should be ready before the drill is set going.

No matter how carefully the process is described, you will never be able to make a fire without practice and personal experimentation. Study the cuts here reproduced, then adapt what you have to the principle. You are sure to succeed if persistent.

Third method, building fire with a flint and steel. Note carefully the implements in Fig. 12. To be successful you will need a select piece of absolutely dry punk wood, the longer the fibers the better, a piece of hard steel fashioned so as to get a good

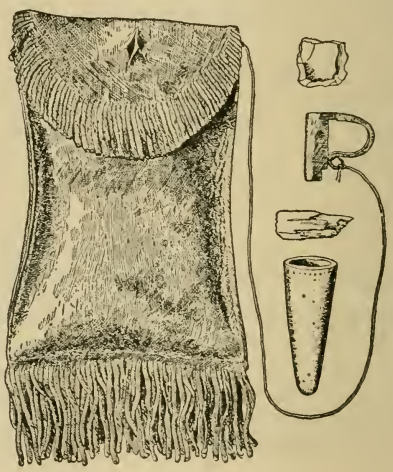


Fig. 12

striking surface without injury to the hand (a large, stout jackknife can be made to work well), a selected piece of flint—it will take much experimenting to find just the right piece, but when found you have a prize. A small tin can may be used for a tinder horn, but the tip end of a cow's horn is better and safer. Prepare the tinder, place it in the horn, then dash the sparks into it. When a tiny bit of smoke rises, blow carefully into a flame and apply the burning tinder to the twigs previously arranged for the

fire. Any boy can become expert in this little trick with persistent effort. If not successful, ask some neighboring old-timer to come in and aid you until you see how it is done.

SECTION 3

The Sheltering Lean-To

The most common of all shelters is the lean-to. It is easily constructed and when properly thatched is quite rainproof. By studying Fig. 13 any group of boys can erect a shelter that will be a protection and a rendezvous for many pleasant occas-



Fig. 13

sions. Select two trees, from six to ten feet apart, with branches about six feet from the ground. If the party is going to remain for several nights or if the place is to be a weekly meeting spot, a double shelter as shown in Fig. 14 should be erected. This will accommodate a good sized group and with a "friendship fire" in the center will gratify the desire for outdoor life of real boys.

A lean-to is a warm, comfortable place when there is a fire burning in front. Its action is like that of a reflecting baker of camp cookery fame; it collects all the straying heat rays that come its way and reflects them upon the forms of the sleepers under its sheltering roof.

The roofing material will depend largely upon the locality. The best materials are balsam, hemlock, spruce, and white pine. If none of these are available, the branches of the maples, the

oaks, the chestnuts, and the birches may be used. Use the largest leaves. When using the foliage of these trees, the roofing should be put on much thicker than when evergreens are used. When thatching, start at the bottom and work up. Waste of wood in America is becoming a serious matter and shelters or lean-tos should be erected only as a necessity. Hacking of trees, skinning the bark from the birches, and cutting young saplings with no

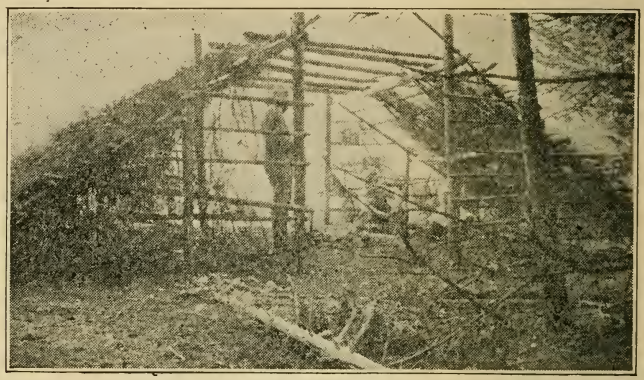


Fig. 14

other purpose than that of mutilation, is committing a crime against nature.

For a permanent camp a building erected after the model of the lean-to will enable a group of boys to meet summer and winter, especially if a stone fireplace is built in front where the log fire will give cheer to the occasion. Fig. 15 shows a sketch of such a lean-to built by the people of Whitinsville, Mass., for just such gatherings of boys and girls.

SECTION 4

What and How to Cook

A meal cooked over an open fire in the great out of doors has a flavor no chef has yet been able to produce. When on a hike

or a week-end camping trip, avoid the "shoe-box-picnic-lunch." Take only the uncooked food with you, including, however, good home-baked bread. While "Bread Twist" and "Darn Good" and other cooked-before-the-fire breads are interesting experiments, they are somewhat severe on the organs of digestion.

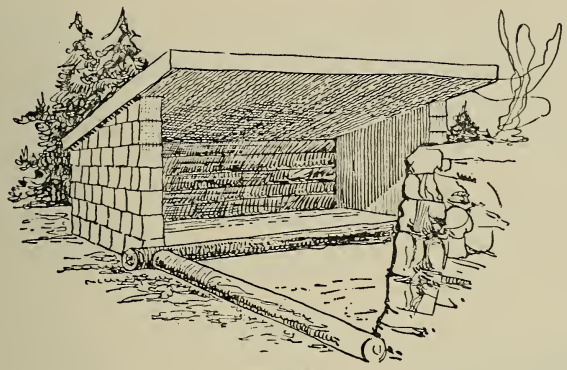


Fig. 15

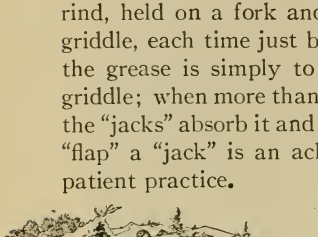
When you arrive at the camping ground, divide your boys into groups and assign them work, such as wood gathering, water carrying, and fire building. This gives every boy a share in making camp.

Be careful in your selection of food. It must be varied, nutritious, and rich in energy values. Many campers suffer from malnutrition, not because of a lack of food but because of improperly balanced meals. Avoid everything that is constipating. The rations in the following list afford a variety of menus and are calculated to satisfy the palate of a growing boy as well as his physical needs: Bacon, baked beans, dried or chipped beef, potatoes, cocoa, coffee (for adults), prepared flour, rolled oats, onions, butter, salt, pepper, sugar, canned salmon, cornmeal, spaghetti, evaporated milk, rice, cheese, prunes. To this list may be added, canned goods such as soups, vegetables, and meats. Buy eggs and milk from nearby farmers.

Wrap all articles of food separately in waxed paper. Bread should be wrapped in a moist cloth to prevent drying up. Pack butter in a small jar. Buy bacon unsliced. You will need the bacon rind to grease the griddle.

"Flapjack Fantasies"

In making "flapjacks" use prepared flour (Aunt Jemima, Teco, Reliable, Heckers, or other well-known brand), as it is more reliable than batter mixed from ordinary flour and you are always sure of the result. Grease the griddle when hot with the bacon rind, held on a fork and moved about over the surface of the griddle, each time just before the batter is poured. The idea of the grease is simply to keep the "jacks" from sticking to the griddle; when more than sufficient grease for that purpose is used the "jacks" absorb it and are heavy, greasy, and indigestible. To "flap" a "jack" is an achievement which comes from long and patient practice.



Ordinary Pancakes. To each level cup of prepared flour, add one cup of cold water and stir with mixing spoon until the batter is the consistency of thick cream. The batter should run from the spoon in a continuous stream like thick syrup. Drop enough batter upon the surface of the hot greased griddle to make a cake of the size desired. When bubbles appear in the center you will notice that it is baking around the edge. When bubbles cover the entire surface "flap" with knife or by "flopping" in the air. For variety, add cocoa to the batter and mix. This gives a delicious chocolate flavor. If blueberries are available drop a few on the batter when poured on the griddle.

Corn Griddle Cakes. Two cupfuls canned corn, one cupful pancake flour, three quarters of a cup of cold water. Beat together the ingredients and fry as usual.

Rice Cakes. Mix cold boiled rice with an equal amount of flour (not prepared flour), add salt and small quantity of baking powder and fry the same as flapjacks.

Fried Mush. Prepare boiled mush by slowly adding cornmeal to boiling water and stir vigorously for twenty or thirty minutes to prevent lumping. Put salt in the water before adding the cornmeal. Serve hot as a breakfast cereal with milk and sugar. When cold it can be cut in slices, rolled in flour and fried in a little grease until brown.

Potatoes

Boiled Potatoes. Wash the potatoes in cold water. Pare off only a narrow strip around the middle of each potato to prevent it from bursting. Put in boiling salted water. When done they can be pierced with a fork. Pour the water off and let them steam for a few minutes.

Fried Potatoes. Cut cold boiled potatoes into medium thick slices. Put a reasonable amount of bacon fat in a hot frying pan, drop the sliced potatoes into the hot grease, sprinkle with salt and pepper, turn frequently with a knife or cake turner, and when golden brown serve.

Baked Potatoes. The potatoes should be buried in hot coals and baked until you can easily pierce them with a fork. Pass a hard wood sliver through them from end to end when they are taken from the fire to let the steam escape, or they will be soggy.

Eggs

Boiled. Raise water to boiling point. Place eggs in the water carefully. Boil for three minutes if you prefer them medium soft.

Fried. Put bacon fat in hot pan, when the fat hisses drop in eggs. Fry three minutes.

Scrambled. Break eggs and beat. Add teaspoonful of milk for each egg. Add salt and pepper. Bacon, finely chopped and added makes a very tasty dish. Put bacon fat in hot pan, pour in eggs and stir carefully until they thicken.

Omelet. Beat whites and yolks separately. Add to yolks salt, pepper, and a tablespoonful of hot water for each egg (hot water makes a more tender omelet then milk). Put bacon fat in hot pan and be sure that the side of the pan is greased or the omelet will stick when turned. Fold in the whites with yolks and pour in pan. When the mixture is cooked until evenly "puffed," roll it and turn.

OTHER DISHES

Bacon. Slice bacon thin and put in heated pan. Fry slowly. Keep the fat or "drippings" and use in frying potatoes, eggs, fish, and other things. Use sliced bread instead of a plate on which to put the fried bacon.

Fish. Clean fish well. Small fish should be fried whole, with the backbone severed to prevent curling up; large fish should be cut into pieces and ribs cut loose from backbone so as to lie flat in pan. Rub the pieces in cornmeal. Fry in plenty of fat to a golden brown, sprinkle lightly with salt and pepper just as the color turns.

Spaghetti. To two quarts of boiling water add one tablespoonful of salt, then add one cup of broken spaghetti. Boil forty minutes or until it is soft. Drain thoroughly, add a lump of butter. Serve with cheese or tomatoes. Add beef capsules to make a rich dressing.

Oatmeal. To four cups of cold water put one and one-half cups of rolled oats, one heaping teaspoonful of salt. Put on slow fire and let gradually come to a boil, stirring frequently to prevent burning, until desired thickness.

Rice. Put one tablespoonful of salt into two quarts of boiling water, add slowly one cup of rice, so as to not check the boiling of the water. Boil until soft. When stirring rice, always use a fork to avoid breaking kernels. Raisins may be added when rice is nearly cooked.

Prunes. Wash and soak prunes in cold water over night. Cook in same water slowly until soft. When nearly done add sugar to taste.

Salmon on Toast. Heat a pint can of salmon, picked into flakes, season with salt and pepper, and put into it a teaspoonful of butter. Stir in one egg, beaten light, with three tablespoonfuls evaporated milk not thinned. Pour mixture on toasted bread.

Cocoa. Allow a teaspoonful of cocoa for every cup of boiling water. Mix the cocoa with hot water or hot milk to a creamy paste. Add equal parts of boiling water or boiled milk and sugar to taste. Boil two or three minutes.

Coffee. For every cup of water allow a tablespoonful of coffee and one extra for the pot. Heat water to boiling point, add coffee,

boil five minutes, settle with one-fourth cup of cold water and serve. By putting the coffee in a small muslin bag and dropping it into the boiling water you avoid "grounds" and get clear coffee.

Baked Beans. Baking beans out-of-doors is a very slow process and only practical when you have plenty of time. It is much better to take oven-baked beans with you and heat up before serving. For the purpose of experimentation and experience, however, the following directions for baking beans are given:

Wash one quart of beans, parboil until when blown upon their skins will burst. Drain. Cover bottom of bean pot with beans. Place slices of salt pork in center and pour balance of beans on it. Add one-half teaspoonful of salt, little pepper, two tablespoonfuls of sugar or one-half cup of molasses, a little onion. Cover with warm water. Place cover on pot and put in oven.

To make a bean oven, dig hole in the ground, one foot deep and one foot wide. Have a fire burning for several hours, and stones hot. Scrape out ashes, coals, and stones. Put in pot of prepared beans, which has had a wet cloth put over the pot before putting on cover. Pack and cover with hot coals and stones and cover with earth. Leave for eight or ten hours. If it should rain, cover with bark.

Camp Fire Broiling

Toasted Cheese Sandwiches. Cut a forked stick of green wood. Make a sandwich of two slices of bread with a rich cheese filling. Toast over the hot coals.

Broiled Chops or Steak. Salt and pepper a chop or small steak. Fasten the edge of the chop or steak firmly on a two-pronged stick about three feet long. The butt end stick into the ground at such a distance and angle as will bring one side of the meat to a broiling distance to the fire. Keep turning the chop or steak until done. Serve with melted butter.

Bacon. Instead of sharpening the prongs, leave them blunt and split them down a little way with a knife, then place the slice of bacon in the splits across the fork of the stick. Placed in this way, it cannot curl and can be turned at will.

SECTION 5

Hikes and Mountain Climbing

Three things hikers should remember: (1) don't carry any more dead weight than you can help; (2) avoid long distances; (3) never walk over anything you can walk around; and never step on anything you can step over. It is amusing to see a boy start off on a hike with an outfit that looks like the display of a sporting goods house. A hiking outfit must be small and yet contain enough to be comfortable.



Dress in khaki or everyday pants. Wear heavy weight tennis shirt. For undershirt wear the sleeveless, buttonless, snug-fitting athletic jersey. It absorbs freely, is easily cleaned, and will serve as part of a bathing suit if necessary. Avoid clammy cotton wearing apparel. Wool is best for hiking. A coat sweater takes the place of a coat.

Never use rubber-soled tennis sneaks. Sticks and stones will punch your feet. Walking and climbing is hard on the bottom of your feet and a reasonably thick sole is a great help. Use medium soled, pliable, U. S. Army shoes (Munsen last) and either canvas leggings or puttees. If your feet "give out," the hike is ended. Bathing the feet at the streams along the road will be refreshing if not indulged in too frequently.

Use medium thick woolen socks or stockings. Wool absorbs the perspiration and prevents chafing. They should be a good fit. A sock that is too large or too small will cause trouble. Natural gray wool is preferable to dyed socks.

Wear a soft hat (Boy Scout style) and replace the leather sweat band with one of cloth. Sweaty leather poisons the skin, causes itching, and does not take hold on the head as will cloth.

Take with you the following list of articles: A tiny pocket comb, a small cake of hard water soap, toothbrush, extra socks, extra jersey, bath towel, khaki handkerchiefs, tube of vaseline,

First Aid Kit (American Red Cross pocket size), Boy Scout pocket knife, matches in small Colgate shaving stick metal box with lid that screws on, pocket flash light, needles, thread, and pins in small case, safety pins, small and blanket size, collapsible drinking cup, combination knife, fork, and spoon, camera and extra film, plumbers' candle. A Stopple Kook Kit will furnish all the cooking utensils needed and weighs only two and one-half pounds.



A three pound U. S. Army blanket may be rolled inside of a poncho and carried over the shoulder. The new pack-sack for Boy Scouts is just the thing for the hiker. For those who desire a tent, get a water-proofed "dri-ki," 8 x 12½ feet, which weighs about five pounds. When set up it has the form of a half pyramid and when taken down is an ordinary flat tarpaulin. You can roll it around your blanket and strap it around your pack.

Select your sleeping place before dark. Watch for prevailing winds and seek a sheltered spot and one that is dry. Don't sleep in damp blankets, dry them before the camp fire. A hot stone wrapped in a shirt or sweater is a good bed warmer. A pillow may be made by shaping a mound of earth with your hands and covering it with a coat or anything convenient. A "hip hole" is made by digging a place in the ground for your hips to fit in. You will get a lot of comfort from such a hole.

Be careful of your drinking water. It is unwise to do any drinking during a hike. This is an Army rule. Be careful of fires. Never throw away a lighted match. Put it out. Never leave a fire that is not absolutely extinguished. Be careful of blisters, cuts, and bruises. Be careful of overeating.

Good walkers always start slowly and gradually increase their pace. Shun spurts. Rest only for a short period; otherwise you will get stiff. Entirely relax when resting by lying flat on the ground. Walk off stiffness.

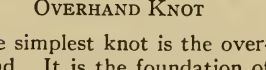
If a party is taking a hike, walk in step and sing or whistle marching tunes. Don't pass the pacemaker; obey the leader. This is team work.

When climbing it is always best to keep to the ridge. Never run down hill, it is tiring.

SECTION 6

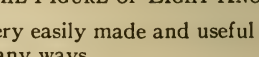
Knots for Every Purpose

Every boy should know how to make and tie a knot properly. Notwithstanding the fact that knotting is an ancient device, used by mankind during the early ages for joining sinews of animals and fibers of plants, the art of tying a knot successfully was only introduced in a serious manner to boys within a comparatively recent period of years. To teach boys how to tie knots that will stand the strain of use is the work of a public benefactor. He will receive showers of blessing from those who have experienced the unloosing of improperly and carelessly tied knots on bundles, tent guys, or halyards.



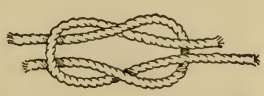
Overhand Knot

The simplest knot is the overhand. It is the foundation of many other knots.



The Figure-of-Eight Knot

Very easily made and useful in many ways.



The Square or Reef Knot

The commonest kind for joining the ends of two ropes. Used in first-aid bandaging.



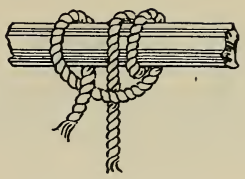
Slip or Running Knot

A useful knot to tie the guy ropes of a tent to the pegs.



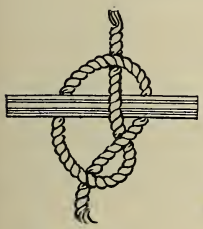
BOWLINE KNOT

A knot that cannot slip and is always used for slinging a man for the purpose of doing some particular kind of work; the worker sits in the sling. Used also by firemen in bringing a person from a building.



MANGUS HITCH

Used in tying guy ropes of a tent to a cross-pole. Not likely to slip. A method of securing a rope to a spar.



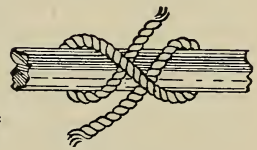
BOAT KNOT

A means of mooring a small boat.



CLEAT HITCH

Used in fastening the halyards of the flag to cleat of the flagpole.



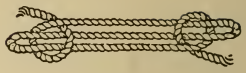
CLOVE HITCH

Sometimes called "Builders Knot," merely two half-hitches. Used to fasten one pole to another in fitting up scaffolding.



"Figure Eight Knot"

For attaching eyed hooks. Used by fishermen.



Sheepshanks

Used for shortening ropes.



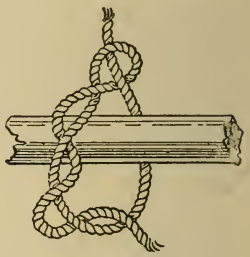
Becket Hitch

For joining a cord and a rope.



Blackwall Hitch

A ready way of securing a rope temporarily to a hook.



Timber Hitch

Used in securing a piece of lumber. The pressure of the coils, one over the other, holds the timber securely.



CHAPTER XII

NATURE HOBBIES[1]

SECTION 1. GETTING ACQUAINTED WITH THE STARS
SECTION 2. HOW TO KNOW THE BIRDS
SECTION 3. COLLECTION AND PRESERVATION OF INSECTS
SECTION 4. THE DEVELOPMENT OF PLANT LIFE
SECTION 5. THE MAKING OF THE EARTH

SECTION 1

Getting Acquainted with the Stars

TAYLOR STATTEN

Although born and brought up in the open country where the gaze of the starry heavens is undimmed by the blinding lights of the city streets, I never learned to distinguish one star from another. I was an uninterested member of the great audience, before which is staged each evening the most wonderful of all spectacles. Some there are who have eyes, but see not!

In this, I was like many another country boy. It was not until after I had been living in the city for some time and was privileged to return again to God's great out of doors that the charm of the sparkling fires of space was revealed to me.

Let me tell you how it happened. We were on a canoe trip through Temagami. One of our party was an accomplished watcher of the skies. Although an amateur, he had recently made a trip to Labrador with some professional astronomers.

[1] Reprinted by permission from The Canadian Standard Efficiency Training "Manual for Trail Rangers" and "Manual for Tuxis Boys," copyrighted, Canada, 1918, by the Committee on Canadian Standard Efficiency Training.

One evening, as we sat on the shore of an island in Lake Temagami, he pointed out some of the stars and constellations and held us fascinated as he unfolded the mysteries of the worlds beyond. Although I soon forgot many of the interesting things he told us, my interest in stars was rooted and each year I have been adding a little to my stock of star knowledge.

Last summer while in Algonquin Park with a party which was organized as a band of Woodcraft Indians, we tried the tests for the knowledge of stars and I discovered, much to my surprise, that I could qualify for a Grand Coup and Star Wise Man's Honors (Woodcraft League).

While visiting the various boys' camps, I have found considerable pleasure in inspiring a few boys to commence star gazing. I trust that the interest planted that night on Lake Temagami may bear much fruit.

The first thing I learned was to locate the North Star. I was told that it was the one star in the sky that apparently did not move. Among other things I learned on that first trip which I have never forgotten was the fact that the two stars at the lip of the Big Dipper always point towards the North Star and appear to revolve completely around it every twenty-four hours. We were shown how to tell the time by trying to picture a big clock in the sky with twenty-four hours marked on the dial instead of twelve and numbering to the left, rather than to the right. The pointers of the Dipper are the hour hand. We tried it and soon discovered that we could tell the time with fair accuracy.

I have never forgotten the "Little Papoose" on the "Old Squaw's" back. The Old Squaw, "Mizar," is the second last star in the handle of the Dipper and the Little Papoose, "Alcor," is just above and apparently almost touching it. An Indian test for good eyesight is to be able to see the Little Papoose.

It would have been difficult to forget the constellation that looks like a broken-down "W," which was supposed by the ancients to be a beautiful lady sitting in a chair. I must confess that although I can always see the Gibson Girl in the moon, I have never been able to form any conception of the appearance of "Miss Cassiopeia." Those old-timers must have been gifted with powerful imaginations. This constellation is to be found

about the same distance from the North Star as the Dipper, but always directly opposite.

The other constellations which are not difficult to locate and which are easily remembered are the Northern Crown, the Northern Cross, the Lyre, the Eagle, the Herdsman, Job's Coffin, the Little Bear, Orion, Pegasus, and Hercules. These, with the Big Dipper, make a total of thirteen constellations. Although you cannot see all at one time, the majority of them will be visible any clear night, and by keeping up your interest during the entire year you will add a great many more to your list.



I have found real delight on a fine summer night in drifting out on a northern lake in a canoe with a copy of Olcott's "A Field Book of the Stars" and a small electric flashlight. After reading and studying the charts, I would turn off the light and try to locate the stars. I am not given to dreaming, but as I drifted away from shore and all sounds of life died out upon the earth save the occasional hoot of an owl and the weird call of a loon, I rejoiced to find how friendly and companionable the stars became. At times the silence of the vast and starry heavens almost filled me with terror. Its immensity seemed overwhelming. As my eyes rested first on one star and then another, and I realized that each was a sun, I tried to picture the worlds that were revolving around them and imagine something of the infinite myriads of systems, each similar to that which our sun controls.

Before you were born the ray of light you see from the North Star had left that orb. During the first second, it travelled 186,000 miles. In a minute it added 11,000,000 miles, and so on for thirty-six and one-half years it traveled at that great speed before it could reach your eye.

As you gaze on the Milky Way, remind yourself that it is a swarm of stars and every star a sun; that your sun is as one of the stars in the Milky Way; that it takes the light from our sun only 8 min. 17 sec. to reach the earth, but that it would take a cannon ball shot from the sun to the earth ten years to

strike us, and an express train, traveling without a stop, about 200 years.

Although there are about 7,000 stars visible to the naked eye, we see only about 3,000 at one time. The most powerful telescope reveals more than 120,000,000 stars. The universe is infinite, space is limitless, with innumerable worlds whose inhabitants in all probability think of us as we try to think of them. I confess that I derive great satisfaction in meditating in this way on infinity and with Flammarion I can say that "nothing stimulates my faith in God more than a few hours of the silence and peace of a bewitching night, contemplating, admiring, spelling out the words of the great Book of the Heavens."

Every boy should make the following stars his friends:

1. *Arc-tu-rus.* Situated in the left knee of the Herdsman (Bootes). It is at its highest point in the heavens on June 8th.

2. *Vega* (the Falling Bird or Harp Star). In the Lyre Constellation. It is directly overhead on August 10th.

3. *Al-tair.* In the Eagle (Aquila) constellation, located in the neck of the Eagle. It reaches its highest point in the heavens on September 1st.

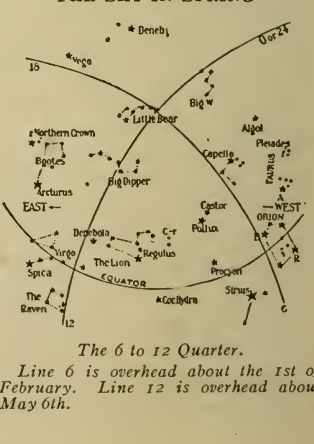
THE SKY IN WINTER



The 0 to 6 Quarter.

Line 0 is overhead about November 22nd. Line 6 is overhead about January 21st.

THE SKY IN SPRING



The 6 to 12 Quarter.

Line 6 is overhead about the 1st of February. Line 12 is overhead about May 6th.

4. *Deneb* (The Hen's Tail). To be found at the top of the Northern Cross or the Tail of the Swan.

5. *Po-la-ris.* The North Pole Star.

6. *Mizar.* The second last star in the handle of the Big Dipper.

7. *Alcor.* Located close to Mizar.

8. *Caph.* The hand of Cassopeia, the Lady in the Chair. Caph is equidistant from the Pole Star and exactly opposite Megres in the Big Dipper.

9. *Gemma.* The brightest star in the Northern Crown.

10. *Al-bi-rea.* The base of the Northern Cross.

11. *Sadr.* The center of the Northern Cross.

12. *Sir-i-us.* Situated in the mouth of the Great Dog. It reaches its highest point in the heavens on February 11th.

13. *Rigel.* In Orion. The left leg of the Giant. It reaches its highest point in the sky June 20th.

14. *Pollux.* Located in the head of Pollux in the Twins (Gemini) Constellation.

15. *Castor.* Located in the head of Castor in the Twins (Gemini) Constellation. It reaches its highest point in the heavens February 23rd.

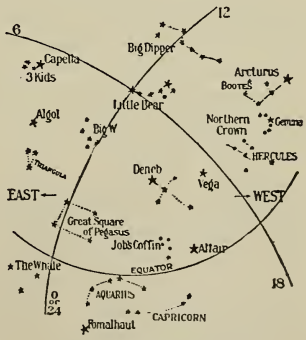
THE SKY IN SUMMER



The 12 to 18 Quarter.

Line 12 is overhead on April 28th. Line 18 is overhead on July 28th.

THE SKY IN AUTUMN



The 18 to 24 Quarter.

Line 18 is overhead on August 22nd. Line 0 or 24 is overhead on November 22nd.

By the aid of the charts in Olcott's book, it will not be difficult to locate the following constellations:

1. *Ursa Major* (er-sa ma-jor). The Great Bear. This is the best known of the constellations. It is familiarly called the Big Dipper, sometimes known as the Plough.

2. *Ursa Minor* (er-sa mi-nor). The Little Bear. The North Star is in the tip of the tail of the Little Bear or the end of the handle of the Little Dipper, if you prefer to think of this constellation as such. Each of the four stars in the bowl of the Little Dipper is of a different magnitude—the brightest one is a second magnitude star and the dimmest of the fifth magnitude.

3. *Cassiopeia* (kas-i-o-pe-ya). The Lady in the Chair. A line drawn from the Big Dipper, through the North Star strikes Cassiopeia. Cassiopeia looks like a broken-down W.

4. *Taurus* (ta-rus). The Bull. This constellation can be easily located because it contains the Pleiades. There is also another V-shaped group of stars known as the Hyades. This is a winter constellation.

5. *Orion* (o-ri-on). The Great Hunter. Orion is also a winter constellation and is generally admitted to be the finest constellation in the heavens. Orion was supposed to be a great hunter and when he died, went to heaven. The three stars in his belt are called the Three Kings. Orion was worshiped in China and was known as the White Tiger. The Esquimaux believe that the three stars in the belt are steps cut by one of their saints in a snowbank to enable him to reach his glory.

6. *Lyra* (li-ra). The Lyre. This constellation may be easily located because of Vega—the very bright star in the zenith during July and August. One of the stars in the Little Triangle is a double. If you have good eyesight, you can detect this with the naked eye. Ordinary opera glasses show the two stars quite clearly. The small telescope in the Observatory at Ottawa shows them about a foot apart and, through the larger telescope, you may see another star almost between them.

7. *Cygnus* (Sign-nus). The Swan or the Northern Cross. The Northern Cross is not far from the Lyre constellation and is located in the Milky Way. The Cross is almost a perfect crucifix.

8. *Aquila* (ak-wi-la). The Eagle. In the summertime, about half way up the sky in the Milky Way, you will find three stars in a line—the middle one being much brighter than the other two. The brightest star is Altair. This constellation resembles the form of an arrow head.

9. *Delphinus* (del-fi-nus). The Dolphin. This is another summer constellation. It is of a diamond-shape form and easily recognized. The early Greeks called it the Sacred Fish and by the Arabs it was known as the Riding Camel.

10. *Sagittarius* (sag-i-ta-ri-us). The Archer. During the months of July, August, and September face the southern sky and locate this constellation by tracing out a Milk Dipper and a Bow and Arrow.

11. *Corona Borealis* (ko-ro-na bo-re-a-lis). The Northern Crown. Not far from the end of the handle of the Dipper may be found a circle of stars or almost a circle, for it is not complete.

12. *Hercules* (her-ku-lez). The Kneeler. This constellation is immediately to the right of the Northern Crown and occupies the part of the heavens towards which the sun is bearing the earth and the planets of our system at the rate of 43,500 miles an hour.

13. *Bootes* (bo-o-tez). The Herdsman. First locate Arcturus, below and to the right of the Northern Crown. This brilliant star forms the lower end of this kite-shaped constellation which can be easily traced out by following the chart. Arcturus is 1,000 times the size of our sun and is mentioned in the book of Job. It is often called the star of Job.

14. *Pegasus* (peg-a-sus). The Winged Horse. PIONEERS should be able to locate this constellation. It is known as the Great Square. It is found by drawing a line from the North Star to Cassiopeia and doubling the distance.

There are many fine books about the stars that are written for beginners. Among the best are:

"A Field Book of the Stars," by Wm. Tyler Olcott (G. P. Putnam & Sons).

"Astronomy for Amateurs," by Camille Flammarion (D. Appleton & Co.).

"A Book of the Stars," by R. F. Collins (D. Appleton & Co.).

"Around the Year with the Stars," by Garrett P. Serviss (Harpers).

SECTION 2

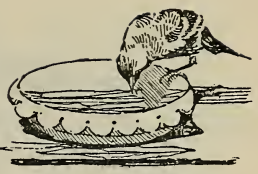
How to Know the Birds

W. E. SAUNDERS
Ornithologist, London, Ont.

Bird life is attractive to every boy and no other hobby is more beneficial in its results. Even if it is followed casually, so that the total number of one's bird acquaintances amounts to perhaps twenty, zest and interest are added to every walk in country or city and one is constantly renewing acquaintances with his feathered friends; and if, on the other hand, the hobby is pursued with enthusiasm, interest grows with the pursuit.



We all know that the bird is an animal that wears feathers, flies in the air, builds nests, and lays eggs, but have you tried to learn anything of the details of the life of these interesting creatures? Do you know what birds prefer to fly, what birds prefer to walk, what birds prefer to swim? Do you know which birds fasten their nests to frail twigs, which ones use larger limbs and crotches, and which use nesting sites around buildings or holes in trees? What birds nest on the ground, and which in holes in the ground? The number of questions that might be asked about these and similar phases of bird life is great, but your interest will be greater if you try to answer questions put by yourself, and you will not be able to ask these questions until you have started to make the acquaintance of some birds.



There are several easy and practical methods of getting acquainted with the birds at short range, any one of which may be used as a start. The easiest, perhaps, is the providing of nesting-places. Providing food and drink is another method which leads to good results. In the summer time it is difficult to provide appropriate food for most birds, but greater numbers of them are attracted by water, which may be offered to them in various containers, from a simple can laid on the ground, to an elaborate stone or concrete basin. It is also possible to get an intimate acquaintance with some birds by taking advantage of their nesting time to approach and make friends, but this is more difficult and takes much more time than inviting the birds to make friends with you. The great advantage of the latter method is that it may be pursued at your home and thus the birds are under constant observation.

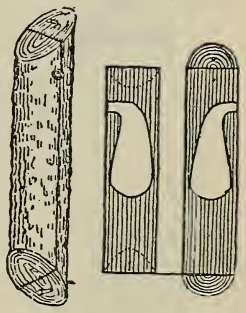


Fig. 1. The Woodpecker Hole.

The number of species that can be induced to nest in places made by human hands is small. The species most easily attracted is doubtless the house wren (Fig. 7) whose bubbling song and familiarly inquisitive manner make him perhaps the most welcome of all the summer sojourners. Wrens will nest in almost any sort of a cavity if they happen to fancy it, but in providing nesting sites for these wild things it is better to approach nature as nearly as possible. Offer them a cavity nearly like the ones which have been used by their kind for hundreds of years, namely, the woodpecker hole. This is not a simple cylindrical hole in a piece of wood, but is shaped as shown (Fig. 1).

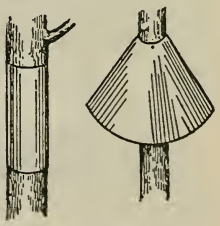


Fig. 2. Protecting the Bird House from Cats

The natural excavation is here compared with that made by the best manufacturers, but it can be pretty well duplicated by splitting a short log and fastening the halves together after the hole is completed. Such houses, when placed in favorable situations, may attract not only the



Fig. 3. Blue Jay

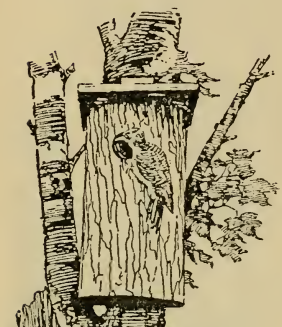


Fig. 4. Downy Woodpecker Inspecting the House



Fig. 5. Robin Nesting on the Bird Shelf

house wren but the flicker (Fig. 8), woodpecker (Fig. 4), bluebird (Fig. 9), tree swallow, crested flycatcher, chickadee (Fig. 9), and nuthatch, and while the first two species do not seem to be much attracted by any cavity except the standard natural one, those mentioned later may be induced to nest in almost any sort of a box.

It seems to be more within the reach of the human being to make friends with these hole-nesting birds than with a great many others, and that is a good reason for endeavoring to begin with birds of that type. Once a pair of birds is induced to nest in your garden, or around your home, the intimacy of your acquaintance with them is limited only by the amount of time you can spend with them.

Some other species of birds may be induced to nest on shelves put up for the purpose. These comprise the robin (Fig. 5), phœbe, barn swallow, bronzed grackle, but the latter, with the cowbird and the blue jay (Fig. 3), are not good subjects for encouragement. They eat nestlings and eggs and it is a usual occurrence to find that where these predacious birds are encouraged smaller and more useful birds diminish.

A little book by Samuel B. Ladd, "How to Make Friends with the Birds," may be studied for additional information along this line.

Classification

As soon as you have made the acquaintance of even a few kinds of birds, it is time

to learn what families they belong to, for the reason that the habits of different species of a family are more or less alike. The robin, for instance, belonging to the thrush family, has habits which resemble to a considerable extent those of the hermit, wood, and other thrushes. The habits of the song sparrow bear a close resemblance to those of other sparrows. The habits of the warblers and fly catchers bear a close relation to each other, and as habits are often a strong clue to the identity of a bird, a knowledge of their relationship will be a valuable aid to identification.



Fig. 6. Chickadee

Color is, of course, the usual key with which a bird's identity is made out, but habits are more instructive and interesting and should be studied as much as possible.

Bill

The most prominent point of resemblance in the different families of birds is the bill. The bill is the means of obtaining food and, therefore, it follows that the bill must carry a certain resemblance. Such families as woodpeckers, flycatchers, and sparrows are good examples of families in which the bill is a real trademark, showing both occupation and relationship.

Color Variation

One phase of bird life which is very attractive and interesting to the beginner is the variation of coloring between the male and female birds. These variations are not confined to any special families, nor do they occur consistently throughout most, but very few families of birds fail to show such variations. Sometimes the differences are trivial

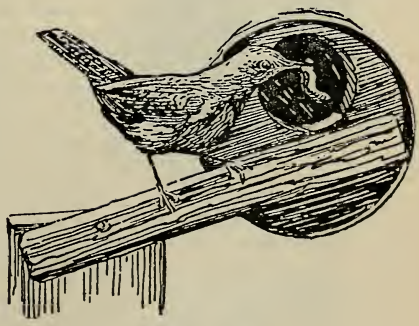


Fig. 7. Wren



Fig. 8. The Flicker at the Woodpecker Hole Bird House

and often the male and female are so different that one would scarcely take them to belong to the same race. As a general rule it may be stated that those species which show the most brilliant colors show the greatest difference between the sexes. Examples are the oriole, tanager, indigo bird, cardinal, bluebird, grosbeak, goldfinch, and others.

Migrations

Birds, like human beings, have a home. It is the place where they return year after year to rear their young. The instinct for migration is developed to a wonderful extent. Set a boy down at Hamilton and tell him to walk to Guelph and he must ask his way many times, but the tiny humming-bird finds his way from Lake Superior across the Gulf of Mexico, and returns with no guide but that of instinct. This sense, if it may be so called, is nearly dormant in human beings.

Nest Construction

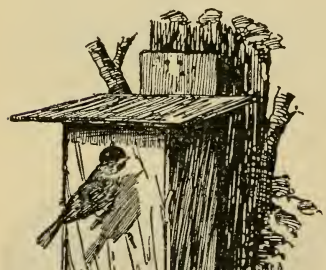


Fig. 9. Bluebird

One of the most interesting departments of bird study is the investigation of nest construction. After the young birds have flown, the nest may be taken and carefully picked to pieces, the pieces laid together in sorted piles and eventually counted. The individuality of birds may thus be studied and if it should be possible to investigate the character of two or more nests made by one bird, the comparison may demonstrate the settled nature of the individual.

Big Birds

Every one ought to feel that in our birds, especially the larger ones, all the people have a common interest and proprietorship, and it is the privilege of no one to kill wastefully, or for display of prowess, any bird which belongs to the whole nation. The larger the bird, the more widespread

is the interest taken in it by the general public, and it must be regretfully stated that the larger the bird, the greater seems to be the impulse, on the part of a certain class of sportsmen, to kill it.

What feature could add more to the interests of our waterways, for example, than the presence of numbers of fish hawks, herons, and eagles? The protection that they need depends largely upon the backing they receive from public sentiment, and every right-feeling boy will give his influence to the protection of these birds that need it so sorely.

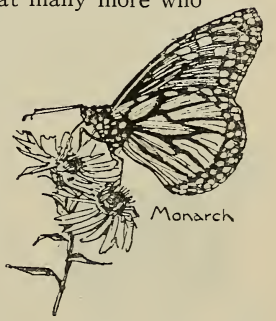
SECTION 3

The Collection and Preservation of Insects

ARTHUR GIBSON

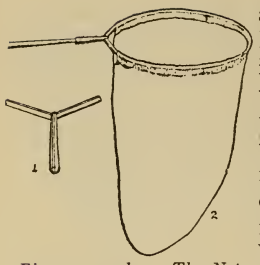
Chief Assistant Entomologist, in charge of Field Crop Investigations, Department of Agriculture, Ottawa

There are many boys who are keenly interested in insects and their habits, and there are, of course, a great many more who have not as yet experienced the pleasure of watching these creatures which play so important a part in the realm of nature. The insect world is truly wonderful and a greater number of young people are every year becoming more interested in its inhabitants.



The following brief directions for the collection and preservation of insects it is hoped will assist those who have an earnest desire to retain specimens for future study. The careless collection of insects is not, of course, advised. Many kinds of insects have a definite purpose in life and their ruthless destruction is not recommended unless they are kinds which are destructive to field crops, trees, and other vegetation.

Nets of various kinds may be purchased from dealers in entomological supplies. A good net for general collecting purposes may be made as follows: Take a piece of cane 38 inches long



Figures 1 and 2. The Net

and rather more than one-quarter inch thick. Bend this into the shape of a circle by dipping in hot water and shave off the ends to fit the upper square projections of a ferrule. Any tinsmith, for a small sum, will make one of these ferrules (Fig. 1). For the bag of the net, green or white leno, or even ordinary mosquito netting, is serviceable. This should be first soaked in water to remove the stiffness. When dry again it can be cut in shape similar to Fig. 2. A piece of strong cotton should be doubled and both edges sewed to the top, so as to make a passage for the cane to slide through to keep the net in shape. A handle about three feet long completes the outfit.

The Killing Bottle

Any wide-mouthed bottle of convenient size will answer. Strong specimen tubes or shell vials can be had cheaply from druggists and may be used for the smaller butterflies and moths or other insects of similar size. Beetles should be killed separately. Potassium cyanide or sodium cyanide are the poisons used for killing insects. Whichever cyanide is used should be broken into small pieces and put into the bottle, just sufficient nearly to cover the bottom. On the top of this should be poured some liquid plaster of Paris, not more than half an inch. Some collectors put in a layer of sawdust between the cyanide and the plaster of Paris. The bottle should then be left standing for a couple of hours before replacing the cork. It is then ready for use. Insects placed in the bottle are quickly killed. The deadly poisonous nature of the cyanide should be kept in mind, and care exercised in handling it. The bottle should be labelled "*Poison.*" Large moths, such as the Emperors and Sphingids, are killed quickest by oxalic acid diluted with water. If the under side of the thorax between the bases of the legs is pierced with a sharp pen dipped into this liquid, some of the acid will find its way into the body and cause almost



Banded Purple

instant death. Preparatory to this a few drops of chloroform may be poured over the body of the insect to stupefy it.

Collecting

With a little experience the collector will soon be expert in the use of the net. It is impossible to lay down any rules as to where to collect. Even butterflies do not all fly in the same places. Some kinds prefer sunny openings in woods; others, swamps or the margins of streams; others, again, are found along railroad tracks. The moths are to be sought for chiefly at night. Many begin to fly during the early evening, and can be caught around flowers at that time. The electric lights on the outskirts of towns and cities attract numbers of moths, beetles, and other insects and here they can easily be collected. Beetles may be collected in the early part of the season from beneath boards, flat stones, and bark of old stumps, and later from flowers, tree trunks, and pools. A simple way of collecting beetles and many other kinds of insects is to hold in one hand an inverted umbrella beneath a branch, tapping the latter with a stick held in the other hand, in order to dislodge any of the insects which may be on the foliage. Dragon flies prefer swampy areas, frequently streams, pools, and such places. Two-winged and four-winged flies are found almost everywhere in fields and woods.



Red Admiral

Mounting

Special tin collecting boxes can be bought, but an ordinary cigar box with a strip of cork glued to the bottom to receive the pins will answer. Entomological pins are a necessity, and these can be purchased in

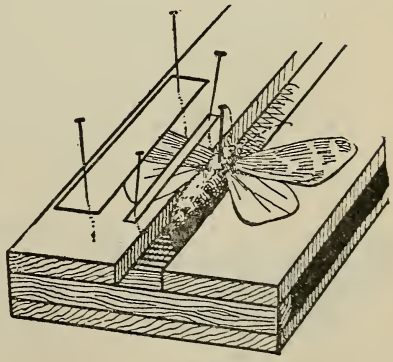
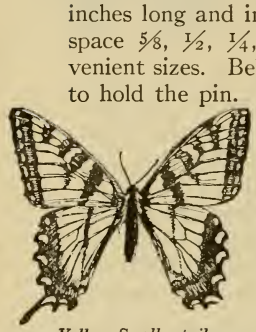


Fig. 3. The Mounting Board

various sizes. Butterflies, moths, dragon-flies, and other large insects, with the exception of the larger beetles, are pinned through the center of the thorax; the beetles are pinned through the right wing cover about one-fourth the distance from the base. Beetles and other kinds of insects too small to be pinned may be preserved by mounting them, with thin LePage's glue on small points made from thin white cardboard like that used for calling cards. These points should be three-eighths of an inch in length by one-eighth of an inch at the wide end. For mounting butterflies and moths, spreading boards are used (Fig. 3). They can be made of any soft wood. As the bodies vary in size several spreading boards are necessary. Boards 12 inches long and in width 6½, 4½, 3¼, and 1½ in. with body space ⅝, ½, ¼, ⅛, and $\frac{1}{16}$ in. wide respectively are convenient sizes. Below the groove a strip of cork should be glued to hold the pin. When mounted, about one-fourth the length of the pin should show above the specimen. The wings should be arranged as shown in the figure, the lower margins of the front wings forming as nearly as possible a straight line. With fine needles the wings can be brought forward and held in place by strips of writing paper or thin cardboard. Specimens should be kept on the spreading board at least a week or ten days.



Yellow Swallowtail

If it is not convenient to mount the specimens immediately after their capture, they may be allowed to dry and later on relaxed by putting them in a receptacle containing an inch or so of damp sand. A vegetable dish with a close-fitting lid does very well for this. In about twenty-four hours the specimens should be relaxed sufficiently to spread.



The Emperor

Preserving Specimens

Every specimen saved should bear a neat label, giving the locality where collected, date of capture, and name of collector. Such information is often of much scientific value. If only

a small collection is being made, mounted specimens may be arranged in ordinary cigar boxes, or any other kind of shallow box, the bottom of which is lined with cork to receive the pins. It will be necessary to keep examining such boxes at short intervals, as they are not, as a rule, tight-fitting and museum pests soon find their way into them and destroy the specimens. Standard insect cases of various sizes may, of course, be bought from dealers. Some forms of deterrent to museum pests, such as naphthaline or camphor, should be put in each case or box. A simple way is to make small bags of cheesecloth and fill these with ordinary flake naphthaline, pinning one of the bags in a corner in each box. A pair of entomological forceps will be found very useful in handling pinned specimens.

Rearing Insects

The collection of immature forms and keeping them under observation is one of the most fascinating phases of insect study. The caterpillars of many of the moths and butterflies are easily reared. Ordinary jelly jars with tin lids make excellent breeding cages. Some earth should be put in the bottom of each jar, as many caterpillars pupate in the ground. Fresh food should be fed every day and care taken to keep the jars clean and out of the sun. Unless the caterpillars are very small, only one or two should be kept in a jar. If a number of the same kind are being reared, larger jars will be necessary. In the fall of the year the cocoons of the Emperor Moths are often seen attached to the limbs of trees. If these are gathered, kept out of doors during the winter, and brought into the house in May of the following year, a most interesting surprise will await the collector.

SECTION 4

The Development of Plant Life

J. W. Emery, Ph.D.
Principal, Normal School, Stratford, Ont.

"And the earth brought forth grass, and herb yielding seed after his kind, and the tree yielding fruit, whose seed was in itself, after his kind; and God saw that it was good."—Genesis 1 : 12.

The earth, as most of us see it, is clothed with verdure. Everywhere we see forms of plant life in endless variety, from the towering giants of the forest to the meek flowers of the field and wood. We admire their beauty, we use them for food or fuel, and we are kept alive by their ability to purify the air. So accustomed have we become to the vegetable life about us that we may have been led to think that it has existed unchanged from the beginning of the world; but such is not the case. It is true that Julius Cæsar probably saw in Britain a vegetation differing but slightly from that which George V. now looks upon; but the time separating these two men is but a moment compared with the ages that God has used in bringing this earth to the stage at which we see it today.

We know that ages upon ages ago the earth cooled from a fiery, gaseous state to a molten form and from this to solid rock. This rock is of the hardest description, chiefly granite. Land plants require soil, and soil is made from the breaking down of rock by such agents as frost, ice, heat, and cold—atmospheric action, a sure but exceedingly slow process. The only plants today that can live on bare rocks are the lichens, so we must suppose that these were among the earliest of the land plants and that they were probably the only plants for a very long period of time. Their remains must have contributed greatly to the formation of the layer of soil so necessary to the growth of the higher plants.

While the earth was being fitted for its crop of vegetation, the water "was bringing forth abundantly." It is here, no doubt, that life first appeared, and that in vegetable form. If you look into any stagnant pond or slow-running stream you will see masses of green, slimy-looking material floating about or fas-

tened to the stones at the bottom. Examination under a microscope shows that this is composed of beautiful thread-like plants, and among them may be seen some that are branching; others again are of spherical shape. Those—the so-called Algæ—are of many species and are the fresh-water representatives of the larger seaweeds found in the ocean. We have reason to believe that these seaweeds occurred long before any of the land plants.

It may be asked how we can speak so confidently about what grew in those ages long before history was written, before man had yet appeared on earth. We have learned that the first rock formed came from the solidified molten mass; it was granite. After this had cooled sufficiently, water was condensed upon it. Imagine the water in the forms of raindrops, streams, and waves, aided by the atmosphere and the heat and cold, acting through immense periods of time till great layers of fine sediment were spread on the sea floor and compressed into solid rock. Imagine the seaweeds and dead shell fish getting mixed up in this material. Imagine the new rock being elevated till it stood uncovered by the sea. We now have a new kind of rock forming the earth's surface, stratified or sedimentary rock. On breaking this we find the petrified remains of the life that was buried in it—fossil plants and animals. In these stratified rocks we have preserved for us a record of the life that has existed on the earth, somewhat disconnected, it is true, but becoming more and more complete as new links are discovered and the "footprints of the Creator" brought more clearly to our view by human research.

Now, to return from this digression, the oldest plant fossils we find are those of seaweeds and the first land plant remains occur in rocks separated from them by immense periods of time.

We must digress again here, in order to consider briefly the different great classes of plants as we find them today. Lowest of all are the Algæ and following in order of complexity of structure are the fungi, mosses, and ferns. These are the so-called flowerless plants. Above these are the seed-bearing plants, first the conifers or evergreens, then those of the palm type including lilies, grains, and grasses, and finally the highest forms represented by our hardwood trees and the majority of our flowering

shrubs and herbs. By a "low" plant is meant one that has few or no organs, being a homogeneous mass or layer or thread or even a single microscopic cell. The "higher" the plants, the greater the differentiation of parts into root, stem, flower, bark, veins, and hairs, each with its peculiar function. It is worthy of note that the oldest rocks contain only the lowly-organized plants, the higher plants appearing in order as the rocks become more recent.

The most interesting of plant remains are in the carboniferous period, the period during which most of our best coal seams were formed from the profuse vegetation of that time. The forests of this period presented a strange sight. There were no hardwood trees, no evergreens; but tall tree-ferns and gigantic horsetails, and the scaly trees, the Lepidodendron, represented now by the little creeping clubmoss used for Christmas decorations. With a little patience any one may find traces of these ancient plants in the pieces of black shale commonly seen mixed with the coal.

In the ages that followed the carboniferous, the evergreens appeared. The rock informs us that at one time the great redwoods, now confined to a short strip in the warmer parts of the Pacific Coast, were the predominant trees of the North American forests. But conditions changed and they passed away, new types taking their place; first the palms and other tropical or sub-tropical trees, and finally the hardwood forests very much like those we see today. And so we not only have our earth clothed with an endless variety of plants, but these have been getting better and better with the passing ages.

We ought not to suppose, however, that God had to perform a special act of creation as each new plant was needed. It sufficed that He gave that mysterious thing Life and an orderly law of development. Changing conditions were then able by a gradual process which we call evolution to convert one form of life into another better adapted to the new environment. Creation is not yet finished.

The biblical account of the creation is so brief that one might get the impression that all the plants were made in one day just at the speaking of a word, and there are many good people who resent the introduction of any other plan as discrediting God's word.

In the foregoing account there is no contradiction of the book of Genesis. Let us be careful not to expect from the Bible that which it was never intended to give us. It is purely a spiritual revelation. In it we find what the human mind, aided by the finest instruments, has been able to discover: God created the earth, the heavens above it, and the life upon it. The Bible is not a book of science nor of history: hence, to discover how He created these things we must look elsewhere. God has given us eyes, ears, reason, and a second great book, nature. With these senses and this reason He bids us read for ourselves.

"There is a book who runs may read;
Which heavenly truth imparts,
And all the lore its scholars need—
Clear eyes and Christian hearts.
The works of God above, below,
Within us and around,
Are pages in that book to show
How God Himself is found."

He would be great, indeed, who could bring all the plants of the world into being by a magic word like some great genius of the Arabian Nights. But is He not an infinitely greater God whose days are aeons; who works through all eternity by systematic, orderly, unchanging laws which are beneficent when obeyed, but bring inevitable disaster to the transgressor?

SECTION 5

The Making of the Earth*

CECIL L. BROWN

I believe one of the most fascinating trips that one can take is an imaginary trip away back down the ages of time, away beyond the earliest dawn of human history. This was many millions of years before men began to record historical events on the walls of their caves, on the sides of great pyramids, on bark,

*Scientists are not and perhaps never may be all agreed upon any one of the theories founded upon geological and other facts, but many, if not most, will agree in general with this account of the making of the earth.

on skins, or on paper; yes, millions of years before men were ever on this earth. Yet the rocks and stones of this earth were wonderful historians and some men whom we call geologists have been able, with the help of the rocks and stones, to read the history of the long ages past, and a wonderful history it is. If I were to attempt to tell you the story of it in detail, it would take many large books, so we will discuss it here only very briefly.

In the beginning God created the heaven and the earth. The earth was without form and unfinished. The writer of Genesis gives us a very true story of the making of the earth, but does not describe the process of making it at all in detail. First, he says that the earth was without form and void. Now, scientists tell us that this was so, and that God caused the earth to exist first in a gaseous state. This great amount of gas was very hot. The heat was far greater than any heat that we know at the present time. Water when it is very hot is in the form of a gas which we call water vapor. As the water vapor cools it turns to a liquid called water, and when it gets very cold it turns to a solid called ice. Now any mineral or rock, if heated to a sufficient temperature, turns to a molten state, and if it is made still hotter, it turns to a gaseous state. Thus it is supposed that all the water, minerals, and rock that we have in the world today were mixed up in an intensely hot gaseous form. The earth then, of course, would have been much larger than now, as we know water expands when it turns to steam, so all of these substances must have taken up more space when in a gaseous state (Fig. 1).

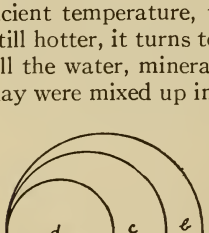


Fig. 1
Illustrating comparative sizes of gaseous stages with present earth.
a. Present Size.
b., c., d. Successive Decreases in Size.

Imagine a world of this kind, nothing but an immensity of flaming vapor. Then, as this gradually began to cool, it naturally turned to a liquid form and this world would be just one vast ocean of fiery matter, swung into mid-space by the Creator, sending its lurid glare of fearful light far through the cold intervals of infinite space.

Supposing it were possible for us to have witnessed this wonderful, yet terrible sight, we would very likely have said, "Surely

God is making a great mistake, how can any created being ever inhabit or enjoy a world like this?" But God's knowledge is deeper than ours, and in this mass of molten matter He saw order and beauty and the beginnings of a great and beautiful earth.

We must never be hasty and doubt God, because God works slowly and in a developmental manner and He never makes a mistake. When we take an acorn into our hands, we might say, "God can never make a strong and sturdy oak tree out of this," but yet we know He does. He takes a hundred years to do it, but when it is finished it is mighty and strong.

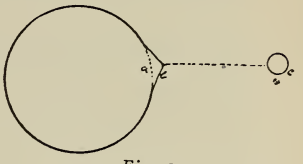


Fig. 2
Illustrating the attractive force of the Moon.
a. Earth.
b. Tidal Wave.
c. Moon.

You have all heard of the tidal wave that crosses the ocean every twenty-four hours. This is supposed to be caused by an attractive force exerted by the moon. Now, we have reason to believe that when the earth was in this molten state the moon would quite naturally cause a wave of this fiery liquid to go clear around the earth every twenty-four hours. As the molten mass cooled, however, a crust, like thin ice forming on water, was formed on the outside of the molten mass, and when the tidal wave came around it shattered this thin crust to fragments. This would take place till the crust was sufficiently thick to withstand the pulling force exerted by the moon (Fig. 2).

As ages of time swept on and the earth's crust became stronger and thicker, the water which had heretofore existed in the form of water vapor, gradually began to cool. A scene of terrific sublimity now approaches. As yet no water existed upon the earth. No rain had fallen upon the parched and blackened crust. All the water which now fills the oceans and the rivers and the lakes, all which saturates the atmosphere and the soil and the rocks, rested then upon the earth as an arid, elastic, invisible vapor, extending an unknown distance into surrounding space. This vapor was not like steam, but intensely hot and invisible. It was like the water vapor just issuing from the exhaust pipe of a steam boiler. The time had now arrived, however, when the remoter regions away from the earth to which this aqueous gas

extended began to be so far reduced in temperature as to cause condensation to begin, as the heated water vapor, rushing from the locomotive, soon cools into a cloud of visible mist or steam. If a person could have been present on the earth at this time, he would have seen the dusky atmosphere begin to thicken. In the far-off regions wisps of paper crept along the sky, as thin dark clouds or cirri. In our day this would denote a gathering storm and so it did in this case. These clouds grew and thickened and darkened, till a pall of impending clouds enwrapped the earth, and the light of the sun, moon, and stars was shut out for a geological age, which probably covered thousands of years.

Particles of cooled vapor drew particles to themselves and the rain drops began to fall towards the warmer strata of air near the earth. But in their descent as they approached the still hot crust of the earth they were scorched to steam again and, as the meteor's light vanishes in mid-heaven, they disappeared and were sent hurrying back to the bosom of the cloud, to be again sent forth as rain and again consumed back into the cloud. At length they got as far as the hot crust, but this seething, hot crust rejected the cool offering and they were driven back to the over-burdened cloud, which had an ocean in its bosom to transfer to the earth.

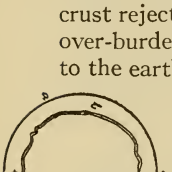


Fig. 3
Illustrating formation of earth's crust.
a. Former Mass.
b. Wrinkles, etc., in Shrinkage.

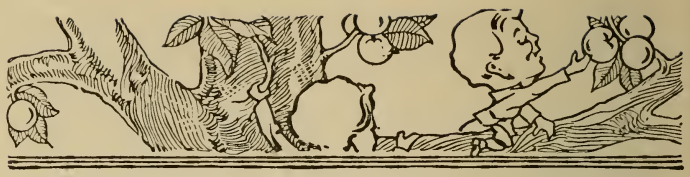
The space between the clouds and the earth was one stupendous scene of ebullition. But the descent of rains and the ascent of vapors disturbed the electricities of the elements. In the midst of this natural yet stupendous contest between fire and water, the voices of heaven's artillery were heard. Lightnings darted through the awful darkness and world-convulsing thunders echoed through the universe. Yet all was order and all part of a great plan. The infinite mind of God the Creator saw in the making an earth beautiful, which would be a fit abode for all the lower creatures He was to create, as well as for men.

But now the great storm has passed and the waters cover the face of the earth. As the crust cools it shrinks and as it shrinks it wrinkles up in places. Mountain ranges and islands protrude up through the surface of the water.

As this cooling process goes on, even continents are heaved up through the surface of the mighty ocean and the water gradually drains off. As this vast ocean we have mentioned washed around the surface of the earth, it caused a great erosion on the rocky crust and a sediment of fine rock gradually was formed and settled on the bottom.

Now, as the islands and continents appeared, shoved up by the earth's shrinkage and covered with this sediment, vegetation sprang up on the land. Then, as the water cooled, myriads of water animals and fish appeared in the oceans and lakes and animals roamed the forests, which already covered much of the land. The plains were clothed in verdant grass; the trees, bearing fruits and nuts, grew in all the forests; multitudes of fishes filled the lakes and rivers; animals roamed the forests, whose flesh was useful for food, and whose skins were excellent for clothing—when all was ready, God introduced man to the earth which He had prepared for him and gave him dominion over all.

This is only a short story of the making of the earth. It does not stretch back into the unknown eternity. However, we find God to be the firm rock of support from which the chain of existence hangs. He is the "Rock of Ages." We feel strengthened and comforted in knowing that, even though our knowledge is very small, even though there are mysteries we cannot explain, there is one thing we know, and that is, "In the beginning God created."



CHAPTER XIII

OUR NATIVE TREES

ERNEST THOMPSON SETON

"Fifty Common Forest Trees of Eastern North America" [1]

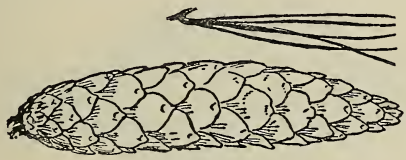
White Pine
Red Pine, Canadian Pine, or Norway Pine
Long-leaved Pine, Georgia Pine, Southern Pine, Yellow Pine
Tamarack, or Larch
White Spruce
Hemlock
Balsam Tree
Bald Cypress
Arbor-vitæ, or White Cedar
Quaking Asp, or Quiver Leaf
Black Willow
Balsam Poplar, or Balm of Gilead
Cottonwood
Black Walnut
White Walnut
Pecan
Shagbark or Shellbark
Mockernut
Pignut Hickory
Red Oak
Scarlet Oak
Black Oak, or Golden Oak
Pin Oak, or Swamp Oak
Beech
Chestnut
White Elm, Water, or Swamp Elm
Slippery Elm
Osage Orange, or Bow-wood
Tulip Tree, White-wood, or Yellow Poplar
Sassafras
Sweet Gum, Star-leaved Gum, or Liquidambar
Sycamore, or Buttonwood
Red-bud, or Judas Tree
Sugar Maple, Rock Maple, or Hard Maple
Silver Maple or Soft Maple
Red, Scarlet, Water, or Swamp Maple

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Gray Birch, or Aspen-leaved Birch
White, Canoe, or Paper Birch
Yellow Birch, or Gray Birch
Ironwood, or Hop Hornbeam
Blue Beech, or American Hornbeam
White Oak
Yellow Oak, or Chestnut Oak
Box Elder, or Ash-leaved Maple
Basswood, White-wood, or Linden
Sour Gum, Black Gum, Pepperidge, or Tupelo
White Ash
Black Ash, Hoop Ash, or Water Ash

White Pine, or Weymouth Pine
(*Pinus Strobus*)

A noble evergreen tree, up to 175 feet high. The lumberman's prize. Its leaves are in bunches of 5, and are 3 to 5 inches long; cones 4 to 8 inches long. Wood pale, soft, straight-grained, easily



White Pine

split. Warps and checks less than any other of our timbers. A cubic foot weighs 24 lbs. (a cubic foot of water weighs 63 lbs.). Minnesota and Manitoba to Nova Scotia and Pennsylvania.



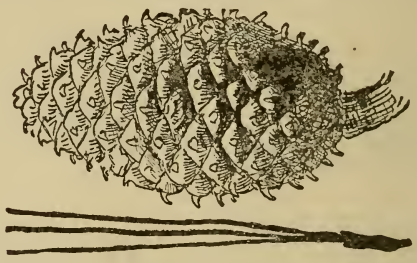
Red Pine

Red Pine, Canadian Pine, or Norway Pine
(*Pinus resinosa*)

Evergreen; somewhat less than the White Pine, with leaves 4 to 6 inches long, in bunches of 2, comes 1½ to 2½ inches long. Wood darker, harder, and heavier. A cubic foot weighs 30 lbs. Range as above.

Long-leaved Pine, Georgia Pine, Southern Pine, Yellow Pine, or Hard Pine
(*Pinus palustris*)

A fine tree, up to 100 feet high; evergreen; found in great forests in the Southern States; it supplies much of our lumber now; and most of our turpentine, tar, and rosin. Wood strong



Long-leaved Pine

and hard, a cubic foot weighs 44 lbs. Its leaves are 10 to 16 inches long, and are in bunches of 3; cones, 6 to 10 inches long. Range, Virginia to Louisiana and Florida.

Tamarack, Larch, or Hackmatack
(*Larix laricina*)

A tall, straight tree of the northern swamps yet often found flourishing on dry hillsides. One of the few conifers that shed all their leaves each fall. Leaves ½ to 1 inch long; cones ½ to ¾ inch. Wood very resinous, heavy, and hard, "a hard, soft wood"



Tamarack

very durable as posts. In Manitoba I have seen tamarack fence posts unchanged after twenty years' wear. It is excellent for firewood, and makes good sticks for a rubbing-stick fire. A cubic foot weighs 39 lbs. Found north nearly to the limit of trees; south to northern New Jersey and Minnesota.

White Spruce

(*Picea Canadensis*)

Evergreen; 60 to 70 or even 150 feet high. Leaves ½ to ¾ inch long; cones 1½ to 2 inches long, are at the tips of the branches and deciduous; the twigs smooth. Wood white, light,



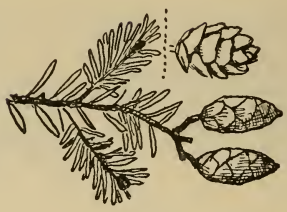
White Spruce

soft, weak, straight-grained, not durable; a cubic foot weighs 25 lbs. Its roots afford the *wat-tap* or cordage for canoe-building and camp use generally. North to the limit of trees east of Rockies, south to Dakota, Wisconsin, and Maine.

Hemlock

(*Tsuga Canadensis*)

Evergreen; 60 to 70 feet high; occasionally 100; wood pale, soft, coarse, splintery, not durable. A cubic foot weighs 26 lbs. Bark full of tannin. Leaves ½ to ¾ inch long; cones about the

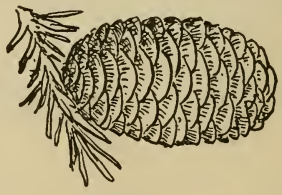


Hemlock

same. Its knots are so hard that they quickly turn the edge of an axe or gap it as a stone might; these are probably the hardest vegetable growth in our woods. Wisconsin to Nova Scotia and south on the mountains to Georgia.

Balsam Tree, or Canada Balsam
(*Abies balsamea*)

Evergreen; famous for the blisters on its trunk, yielding Canada balsam which makes a woodman's plaster for cuts or a waterproof cement; and for the exquisite odor of its boughs,



Balsam

which also supply the woodman's ideal bed. Its *flat* leafage is distinctive. Wood pale, weak, soft, perishable. A cubic foot weighs 24 lbs. New Alberta to Newfoundland and south to Virginia.

Bald Cypress
(*Taxodium distichum*)

A fine forest tree, up to 150 feet, with thin leaves somewhat like those of Hemlock, half an inch to an inch long; cones rounded about an inch through. Sheds its leaves each fall so is



Bald Cypress

"bald" in winter. Noted for the knees or upbent roots that it develops when growing in water. Timber soft, weak, but durable and valuable; a cubic foot weighs 27 lbs. In low wet country of Mississippi Valley and southeast coast.

Arbor-vitæ, or White Cedar
(*Thuya occidentalis*)

Evergreen; 50 to 60 feet high. Wood soft, brittle, coarse-grained, extremely durable as posts; fragrant and very light (the lightest on our list). Makes good sticks for rubbing-stick fire.



Arbor-vitæ

A cubic foot weighs only 20 lbs. The scale-like leaves are about 6 to 8 to the inch, the cones half an inch long or less. Manitoba to Nova Scotia, and Pennsylvania; south on mountains to North Carolina.

Quaking Asp, Quiver Leaf, Aspen Poplar, or Popple
(*Populus tremuloides*)

A small forest tree, but occasionally 100 feet high. Readily known by its smooth bark, of a light green or whitish color. The wood is pale, soft, close-grained, weak, perishable, and light. A



Quaking Asp

cubic foot weighs 25 lbs. Good only for paper pulp, but burns well when seasoned. When green it is so heavy and soggy that it lasts for days as a fire check or back-log. Leaves 1½ to 2 inches long. Canada and Northern States.

Black Willow
(*Salix nigra*)

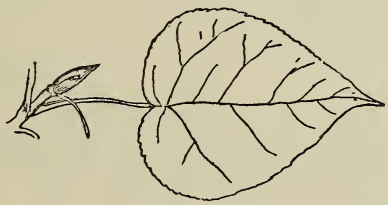
The common Willow of stream-banks, usually 20 to 40 feet high, sometimes 100. Bark nearly black. Its long, narrow, yellow-green shining leaves are sufficiently distinctive. A decoction of Willow bark and roots is said to be the best known substitute for quinine. Noted for early leafing and late shedding; leaves 3 to 6 inches long. Wood pale, weak, soft, close-grained; a cubic foot weighs 28 lbs. Manitoba to Nova Scotia and south to Gulf.



Black Willow

Balsam Poplar, Balm of Gilead, or Tacamahac
(*Populus balsamifera*)

Fifty to 60 feet ordinarily, but sometimes 100 feet high. Bark rough and furrowed. The great size of the buds and their thick



Balsam Poplar

shiny coat of fragrant gum are strong marks. Wood much as in the preceding, but weighs 23 lbs. a cubic foot. Leaves 3 to 6 inches long. Canada and Northern States.

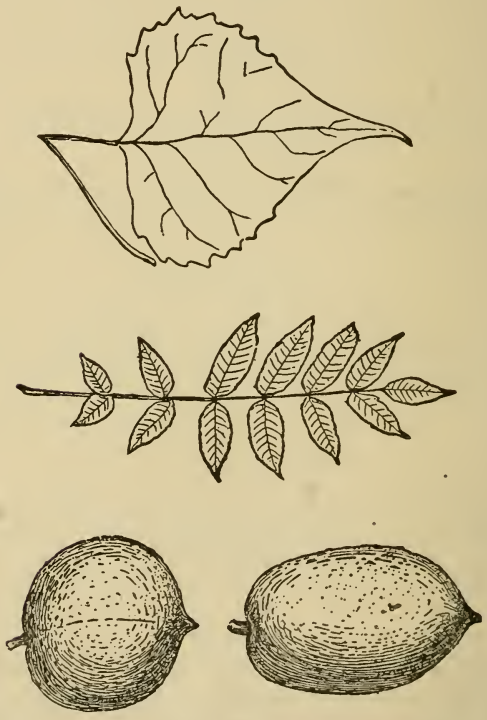
Cottonwood
(*Populus deltoides*)

Small and rare in the Northeast. Abundant and large in West; even 150 feet high. Wood as in other poplars but weighs 24 lbs. a cubic foot. Leaves 3 to 5 inches long. Maine to Georgia and west to Alberta.

Black Walnut

(*Juglans nigra*)

A magnificent forest tree up to 150 feet high; usually much smaller in the East. Wood a dark purplish brown or gray; hard, close-grained; strong; very durable in weather or ground work, and heavy. A cubic foot weighs 38 lbs. Leaflets 13 to 23; and 3 to 5 inches long. Fruit nearly round, 1½ to 3 inches in diameter. Massachusetts to Minnesota and south to Mississippi.

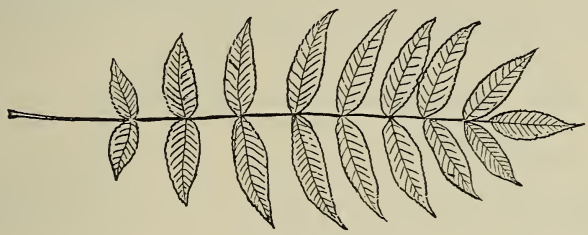


Fruit of black walnut Fruit of butternut

About half size

White Walnut, Oil Nut, or Butternut
(*Juglans cinerea*)

Much smaller than the last, rarely 100 feet high; with much smoother bark and larger, coarser, compound leaves, of fewer leaflets, but the petioles or leaflet stalks and the new twigs are covered with sticky down.



White Walnut

The wood is light brown, soft, coarse, not strong, but very enduring in weather and ground work; light; leaves 15 to 30 inches long; leaflets 11 to 19 in number and 3 to 5 inches long; fruit oblong, 2 to 3 inches long. Nova Scotia to Minnesota and south to Mississippi.





Pecan

Pecan
(*Hicoria Pecan*)

A tall slender forest tree in low moist soil along streams, up to 170 feet in height; famous for its delicious nuts, which are smooth and thin shelled; fruit, oblong, cylindrical, 1½ to 2½ inches long. Its leaves are smooth when mature; leaflets 11 to 15, and 4 to 7 inches long; wood hard and brittle, a cubic foot weighs 45 lbs. Central Mississippi Valley.

Shagbark, Shellbark, or White Hickory
(*Hicoria ovata*)

A tall forest tree up to 120 feet high. Known at once by the great angular slabs of bark hanging partly detached from its main trunk, forced off by the growth of wood, but too tough to

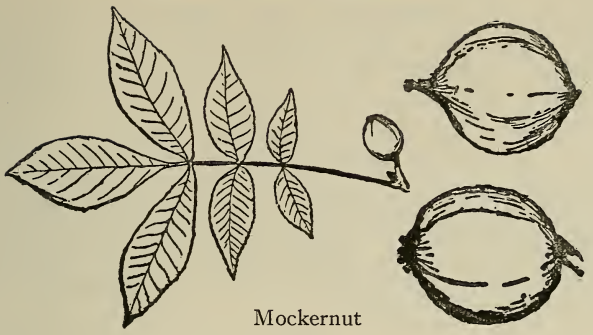


Shagbark

fall. Its leaves are 8 to 14 inches long, with 5 to 7 broad leaflets. The wood is very light in color, close-grained, tough, and elastic. It makes an excellent bow; is the best of fuel. A cubic foot weighs 52 lbs. Dakota to Maine and south to Mississippi.

Mockernut, White Heart, or Big-bud Hickory
(*Hicoria alba*)

A tall forest tree, up to 100 feet. Wood much like that of Shagbark, but not quite so heavy (51 lbs.). Its bark is smooth



Mockernut

and furrowed like that of the Pignut. Its leaves are like those of the Shagbark, but it has 7 to 9 leaflets, instead of 5 to 7; it has a large terminal bud ½ to ¾ of an inch long, and the leaves have a resinous smell. Its nut in the husk is nearly 2 inches long; the nut shell is 4-ridged toward the point, has a very thick shell, and small, sweet kernel. Maine to Oklahoma and Florida.

Pignut Hickory

(*Hicoria glabra*)

A tall forest tree; 100 and up to 120 feet high. Wood much as in the Mockernut; bark smooth and furrowed; not loose



Pignut Hickory

plates. Leaves 8 to 12 inches long. Nut slightly or not at all angular, very thick shelled; the pear shape of fruit is a strong feature, 1¼ to 2 inches long. Maine to Nebraska and south to the Gulf.

Gray Birch, or Aspen-leaved Birch

(*Betula populifolia*)

A small tree found on dry and poor soil; rarely 50 feet high. Wood soft, close-grained, not strong, splits in drying, useless for weather or ground work. A cubic foot weighs 36 lbs. Leaves 2 to 3 inches long. It has a black triangular scar at each armpit. Quebec south to Maryland.



Gray Birch



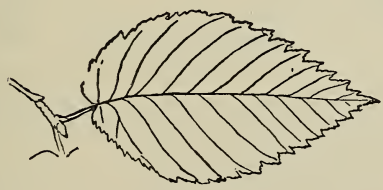
White

White, Canoe, or Paper Birch
(*Betula papyrifera*)

A tall forest tree up to 80 feet high; the source of bark for canoes, etc. One of the most important trees in the northern forest. Besides canoes, wigwams, vessels, and paper from its bark, it furnishes syrup from its sap and the inner bark is used as an emergency food. Every novice rediscovers for himself that the outer bark is highly inflammable as well as waterproof, and ideal for fire-lighting. Though so much like the Gray Birch, it is larger, whiter, and with but small black scars at each limb. The timber is much the same, but this weighs 37 lbs. Its leaf and catkin distinguish it; the former is 2 to 3 inches long. All Canada and south to Illinois.

Yellow Birch, or Gray Birch
(*Betula lutea*)

A forest tree, of 30 to 50 feet in height. Bark obviously birch, but shaggy and gray or dull yellow. Wood as in the others, but

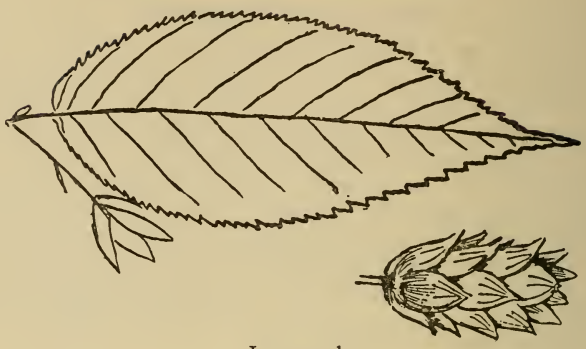


Yellow Birch

reddish. A cubic foot weighs 41 lbs. Leaves 3 to 4 inches long. Minnesota to Newfoundland and south to Virginia.

Ironwood, Hard-hack, Leverwood, Beetle-wood, or Hop Hornbeam
(*Ostyra Virginiana*)

A small tree; 20 to 30, rarely 50, feet high; named for its hardness and its hoplike fruit. Bark furrowed. Wood tough, close-grained, unsplitable. One of the strongest, heaviest, and

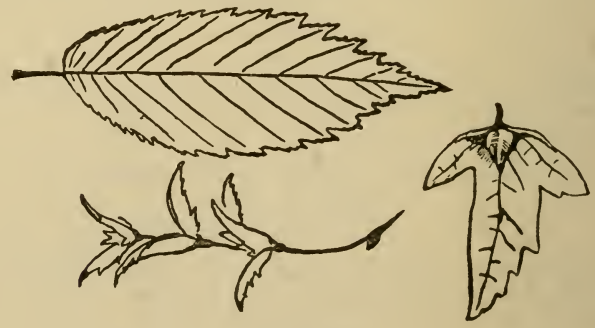


Ironwood

hardest of timbers. A cubic foot weighs over 51 lbs. That is, it comes near to Shagbark Hickory in weight and perhaps goes beyond it in strength and hardness. Leaves 3 to 5 inches long. Fruit 1½ to 2½ inches long. Dakota to Nova Scotia and south to Gulf.

Blue Beech, Water Beech, or American Hornbeam
(*Carpinus Caroliniana*)

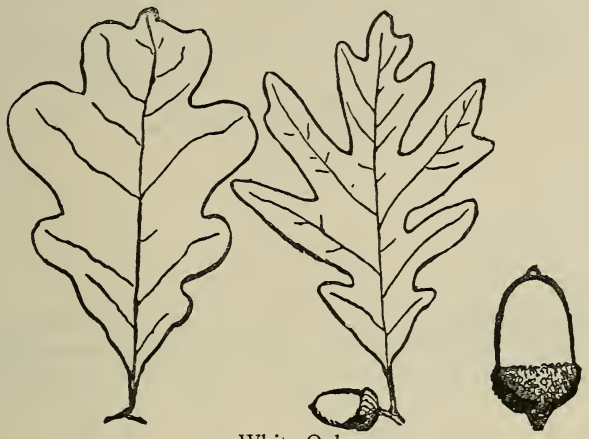
A small tree, 10 to 25, rarely 40, feet high; bark smooth. Wood hard, close-grained, very strong; much like Ironwood, but lighter. A cubic foot weighs 45 lbs. Leaves 3 to 4 inches long. United States east of Missouri River.



Blue Beech

White Oak
(*Quercus alba*)

A grand forest tree; over 100 feet up to 150 feet high. The finest and most valuable of our oaks. The one perfect timber for shipbuilders, farmers, and house furnishers. Its wood is pale,

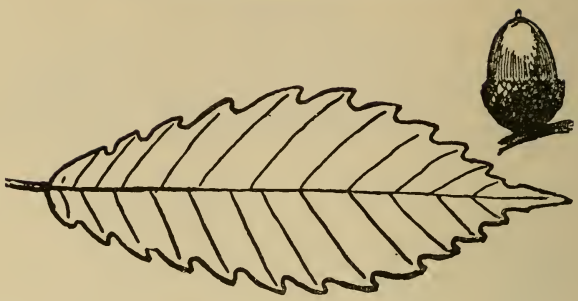


White Oak

strong, tough, fine-grained, durable, and heavy. A cubic foot weighs 46 lbs. I found that when green it weighed 68 lbs. to the cubic foot and of course sank in water like a stone. Called white from pale color of bark and wood. Leaves 5 to 9 inches long. Texas to Minnesota and easterly.

Yellow Oak, Chestnut Oak, or Chinquapin Scrub Oak
(*Quercus Muhlenbergii*)

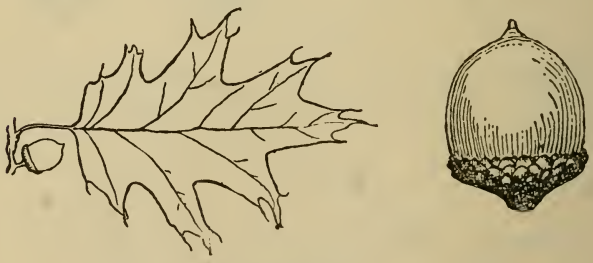
A great forest tree; up to 160 feet high; wood as usual, but the heaviest of all when dry; a cubic foot weighs 54 lbs.; when green, it is heavier than water, and sinks at once. It is much like the Chestnut Oak but its leaves are narrower, more sharply saw-edged, and its acorns much smaller, about half the size. Its acorns ripen in one season. Leaves 4 to 6 inches long. Louisiana to Iowa and easterly to Massachusetts.



Yellow Oak

Red Oak
(*Quercus rubra*)

A fine forest tree, 70 to 80, or even 140, feet high. Wood reddish brown. Sapwood darker. Hard, strong, coarse-grained, heavy. A cubic foot weighs 41 lbs. It checks, warps, and does

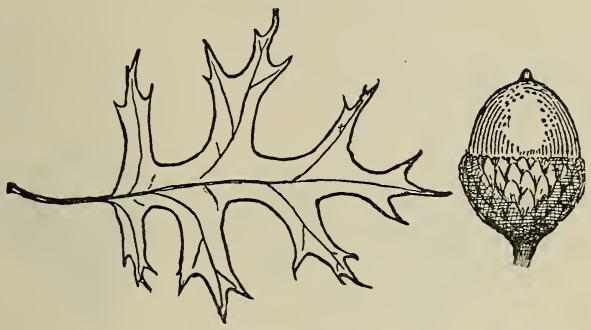


Red Oak

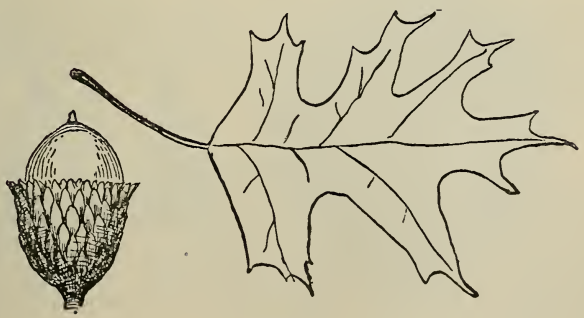
not stand for weather or ground work. The acorn takes two seasons to ripen. Apparently all those oaks whose nuts take *two* seasons to ripen have wood that soon rots. The low, flat shape of the cup is distinctive; in fact, it has no cup, it has a saucer; leaves 4 to 8 inches long. Missouri to Minnesota and east to Atlantic.

Scarlet Oak
(*Quercus coccinea*)

Seventy to 80 or even 160 feet high. Scarlet from its spring and autumn foliage color. The leaves are a little like those of the Black Oak, but are frondlike with three or four deep, nearly even, cuts on each side. The acorns of this can be easily matched among those of the Black Oak, but the kernel of the Scarlet is white, that of the Black is yellow; they take two seasons to ripen. Wood much as in Red Oak but weighs 46 lbs. per cubic foot. Leaves 4 to 8 inches long. Massachusetts to Georgia and Iowa.



Scarlet Oak



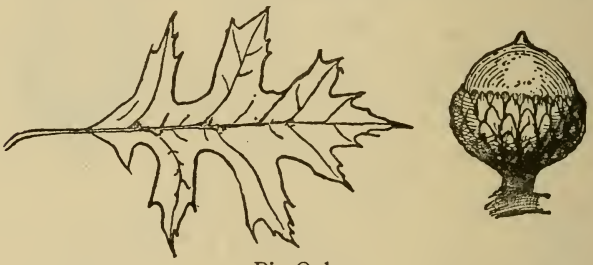
Black Oak

Black Oak, Golden Oak, or Quercitron
(*Quercus velutina*)

Seventy to 80 or even 150 feet high. The outer bark is very rough, bumpy, and blackish; inner bark yellow. This yields a yellow dye called *quercitron*. The leaf is of the Scarlet Oak style, but has uneven cuts and usually a large solid area in the outer half. The wood is hard, coarse-grained, checks, and does not stand for weather or ground work. A cubic foot weighs 44 lbs. Wisconsin to Maine and south to Gulf.

Pin Oak, or Swamp Oak
(*Quercus palustris*)

Fifty to 70 or even 120 feet high, in swampy land. Wood hard, coarse-grained, very strong and tough. Will not stand

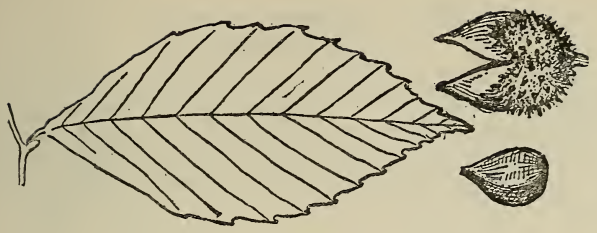


Pin Oak

exposure next to ground. A cubic foot weighs 34 lbs. Its acorns take two seasons to ripen. Leaves 4 to 6 inches long. In moist woods and along swamp edges. Massachusetts to Iowa and Arkansas.

Beech
(*Fagus grandifolia*)

In all North America there is but one species of Beech. It is a noble forest tree, 70 to 80, and occasionally 120, feet high; readily distinguished by its unfurrowed ashy gray bark. Wood hard, strong, tough, close-grained, pale, heavy. Leaves 3 to 4 inches long. A cubic foot weighs 43 lbs. Wisconsin to Nova Scotia and south to Gulf.

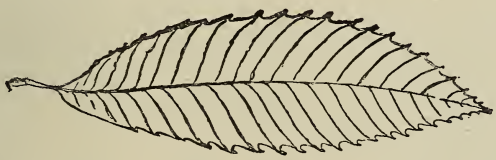


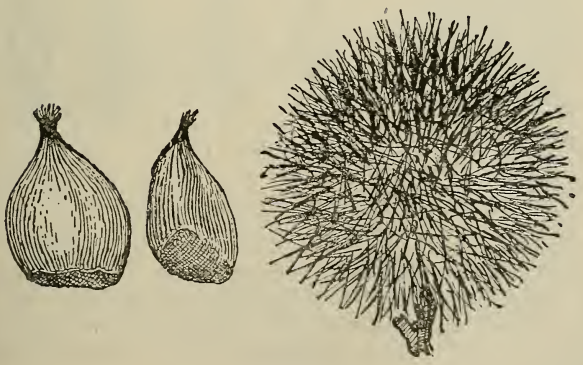
Beech

Chestnut

(*Castanea dentata*)

A noble tree, 60 to 80 or even 100 feet high. A cubic foot of the wood weighs 28 lbs. Leaves 6 to 8 inches long. Massachusetts to Indiana and Mississippi.

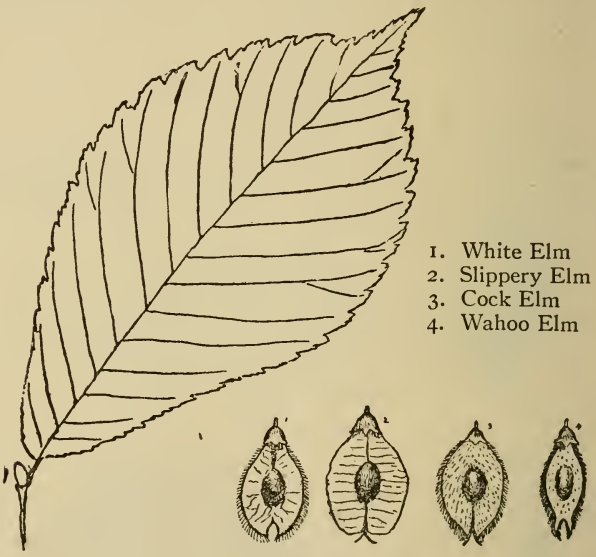




Chestnut

Slippery Elm, Moose, or Red Elm
(*Ulmus fulva*)

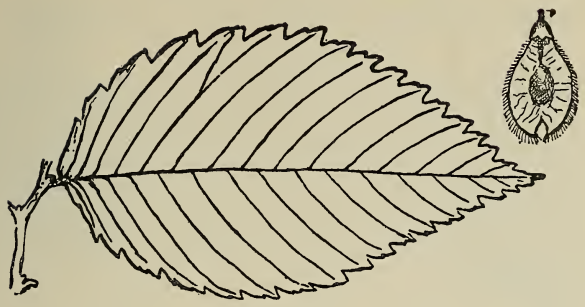
Smaller than White Elm, maximum height about 70 feet. Wood dark, reddish, hard, close, tough, strong; durable next the ground; heavy; a cubic foot weighs 43 lbs. Its leaves are *larger and rougher* than those of the former. Four to 8 inches long, and its buds are hairy, not smooth. Maine to Minnesota and south to Gulf.



Slippery Elm

White Elm, Water, or Swamp Elm
(*Ulmus Americana*)

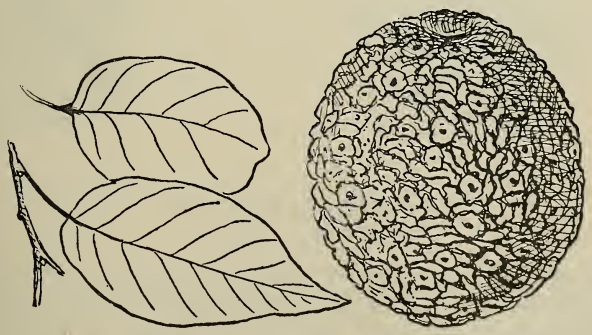
A tall, splendid, forest tree; commonly 100, occasionally 120, feet. Wood reddish brown; hard, strong, tough, very hard to split. A cubic foot weighs 41 lbs. Soon rots near the ground. Leaves 2 to 5 inches long. Manitoba to Nova Scotia and south to Gulf.



White Elm

Osage, Orange, Bodarc (Bois D'arc), or Bow-wood
(*Toxylon pomiferum*)

A small tree, rarely 60 feet high. Originally from the middle Mississippi Valley, now widely introduced as a hedge tree. Famous for supplying the best bows in America east of the Rockies. Wood is bright orange; very hard, elastic, enduring, and heavy. Leaves 3 to 6 inches long. A cubic foot weight 48 lbs.



Osage

Tulip Tree, White-wood, Canoe Wood, or Yellow Poplar
(*Liriodendron tulipifera*)

One of the noblest forest trees, ordinarily 100 feet, and sometimes 150 feet, high. Noted for its splendid, clean, straight column; readily known by leaf, 3 to 6 inches long, and its tulip-like flower. Wood soft, straight-grained, brittle, yellow, and very light; much used where a broad sheet easily worked is needed but will not stand exposure to the weather; is poor fuel; a dry cubic foot weighs 26 lbs. Mississippi to Atlantic, Lake Ontario to Gulf.



Tulip Tree

Sassafras, or Ague Tree
(*Sassafras sassafras*)

Usually a small tree of dry, sandy soil, but reaching 125 feet high in favorable regions. Its wood is dull orange, soft, weak, coarse, brittle, and light. A cubic foot weighs 31 lbs. Very durable next the ground. Leaves 4 to 7 inches long. Maine to Iowa and Texas to Atlantic. (See next page.)



Sassafras

Sweet Gum, Star-leaved, or Red Gum, Bilsted, Alligator Tree, or Liquidambar

(*Liquidambar styraciflua*)

A tall tree up to 150 feet high of low, moist woods, remarkable for the corky ridges on its bark, and the unsplitable nature of its weak, warping, perishable timber. Heart-wood reddish brown, sap white; heavy, weighing 37 lbs. to cubic foot. Leaves 3 to 5 inches long. Massachusetts to Missouri and south to Gulf. (See next page.)

Sycamore, Plane Tree, Buttonball, or Buttonwood

(*Platanus occidentalis*)

One of the largest of our trees; up to 140 feet high; commonly hollow. Wood light brownish, weak; hard to split; heavy for its strength. A cubic foot weighs 35 lbs. Little use for weather work. Famous for shedding its bark as well as its leaves. Leaves 4 to 9 inches long. Canada to the Gulf. (See next page.)



Sweet Gum

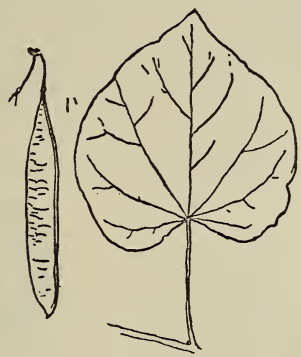


Sycamore

Red-bud, or Judas Tree
(*Cercis Canadensis*)

Small tree of bottom lands, rarely 50 feet high; so called from its abundant spring crop of tiny rosy blossoms, coming before the leaves, the latter 2 to 6 inches broad. "Judas tree" because it blushed when Judas hanged himself on it (Keeler). Its wood is dark, coarse, and heavy.

A cubic foot weighs 40 lbs. Maryland to Iowa and southward.



Red-bud

Sugar Maple, Rock Maple, or Hard Maple
(*Acer saccharum*)

A large, splendid forest tree, 80 to 120 feet high; red in autumn. Wood hard, strong, tough, and heavy but not durable.



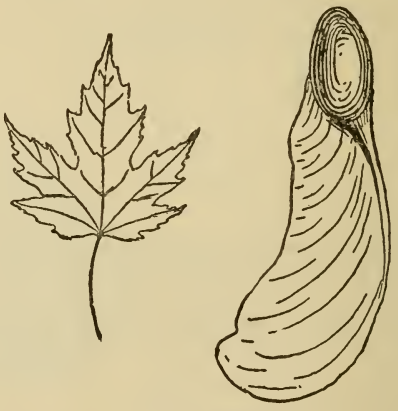
Sugar Maple

A cubic foot weighs 43 lbs. It enjoys with Beech, Hickory, etc., the sad distinction of being a perfect firewood. Thanks to this it has been exterminated in some regions.

Bird's-eye and curled Maple are freaks of the grain. Leaves 3 to 5 inches long. Its sap produces the famous maple sugar. Manitoba to Nova Scotia and south to Gulf.

Silver Maple, White, or Soft Maple
(*Acer saccharinum*)

Usually a little smaller than the Sugar Maple and much inferior as timber. Wood hard, close-grained. A cubic foot weighs 33 lbs. Leaves 5 to 7 inches long. This tree produces a little sugar. It is noted for its yellow foliage in autumn. Nova Scotia to Minnesota and south to Oklahoma and Georgia.



Silver Maple

Red, Scarlet, Water, or Swamp Maple
(*Acer rubrum*)

A fine tree the same size as the preceding. Noted for its flaming crimson foliage in fall, as well as its red leaf-stalks, flowers, and fruit earlier. Its wood is light-colored, tinged

reddish, close-grained, smooth with varieties of grain, as in Sugar Maple; heavy. A cubic foot weighs 39 lbs. Leaves 2 to 6 inches long. Quebec to Minnesota and south to Gulf.



Red Maple

Box Elder, or Ash-leaved Maple
(*Acer Negundo*)

A small tree, 40 to 50 up to 70 feet high, found chiefly along streams. Wood pale, soft, close-grained, light. A cubic foot weighs 27 lbs. Poor fuel. Makes paper-pulp. Leaflets 2 to 4 inches long. Massachusetts to British Columbia south to Mexico and Alabama.

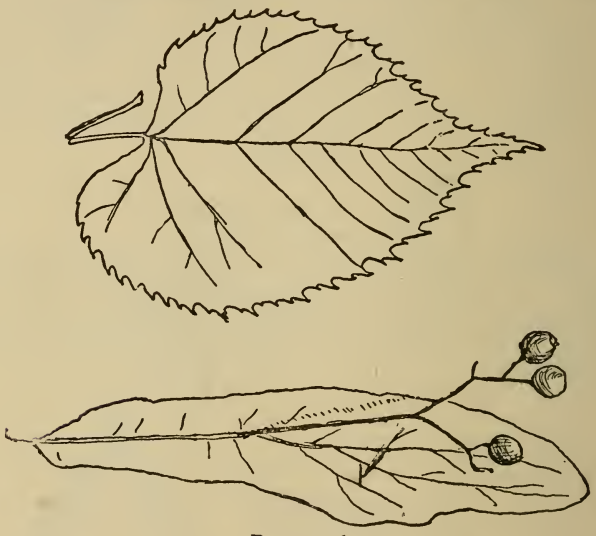


Box Elder

Basswood, White-wood, Whistle-wood, Lime, or Linden
(*Tilia Americana*)

A tall forest tree 60 to 125 feet; usually hollow when old. Wood soft, straight-grained, weak, white, very light. A cubic foot weighs 28 lbs. It makes a good dugout canoe or sap trough.

The hollow trunk, split in halves, was often used for roofing. Poor firewood, and soon rots, makes good rubbing-sticks for friction fire. Its inner bark supplies coarse cordage and matting. Its buds are often eaten as emergency food. Leaves 2 to 5 inches wide. Manitoba to Nova Scotia and south to Texas.



Basswood

Sour Gum, Black Gum, Pepperidge, or Tupelo
(*Nyssa sylvatica*)

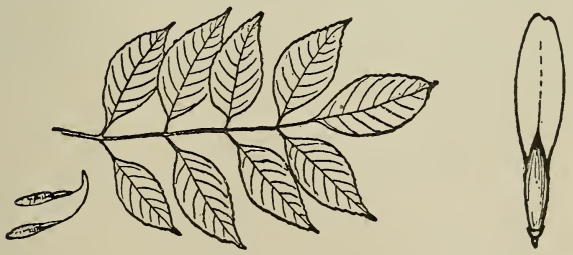
A forest tree up to 110 feet high; in wet lands. Wood pale, very strong, tough, unsplitable, and heavy. A cubic foot weighs 40 lbs. Used for turner work, but soon rots next the ground. Leaves 2 to 5 inches long. Massachusetts to Wisconsin and south to Gulf.



Sour Gum

White Ash
(*Fraxinus Americana*)

A fine forest tree on moist soil; 70 to 90 or even 130 feet high. Wood pale brown, tough, and elastic. Used for handles, springs,



White Ash

bows, also arrows and spears; heavy. A cubic foot weighs 41 lbs. Soon rots next the ground. Called white for the silvery under sides of the leaves; these are 8 to 12 inches long; each leaflet 3 to 5 inches long. Mississippi Valley and east to Atlantic.

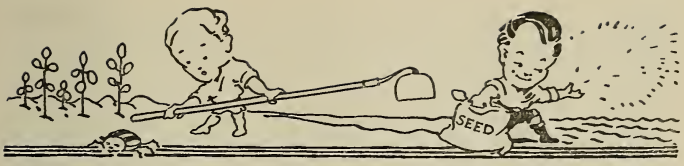
Black Ash, Hoop Ash, or Water Ash
(*Fraxinus nigra*)

A tall forest tree of swampy places; 70, 80, or rarely 100 feet high. Wood dark brown, tough, soft, coarse, heavy. A cubic



Black Ash

foot weighs 39 lbs. Soon rots next to the ground. Late in the spring to leaf, and early to shed in the fall. The leaves are 12 to 16 inches long; its leaflets, except the last, have no stalk, they number 7 to 11, are 2 to 6 inches long. Nova Scotia to Manitoba, and south to Virginia.



CHAPTER XIV

HOW TO HAVE A GOOD GARDEN[1]

"Five hundred million dollars! Boys, that's a heap of money."

Now, let your imagination run a few moments and just think of the enormous piles of potatoes and beets and onions and ears of corn and bushels of carrots and radishes, to say nothing at all of the wagon-loads of cabbage and pumpkins and melons that you could buy with $500,000,000. Yet that is the amount of food that the boys and girls, men and women of America grew last summer in their back-yard gardens. Then, too, just remember, please, that the mere food produced was only part of the adventure. Think of the fine exercise in the open air; think of the friendly spirit of competition between all the folks of a neighborhood to see who would have lettuce first or grow the largest cucumber. Just think of the better diet, just think of the saving in money, just think of the personal satisfaction of using all your spare minutes being a producer. A good garden is an achievement and all achievements are worth while to a live boy. What a challenge are the weeds and the bugs! No boy but a real boy can grow a real garden.

The back-yard garden has come to stay, too. There will be more of them each year than the year before, and they will be better gardens, for thousands upon thousands of boys are fast becoming experienced. This brief chapter is not meant to be a garden manual—there are any quantities of those available at any library. The purpose of these pages is to get you inter-

[1] Adapted from pamphlet, "War Gardening and Home Storage of Vegetables," copyright, 1919, by National War Garden Commission; used by permission.

ested, for you can only actually learn to garden by gardening. Here is the beginning and the ending of the whole thing:

First. You must hoe out your own experience.

Second. Make early preparations. Get a good piece of ground in the fall, manure it, and turn it over once.

Third. Get first-class seed, plant it at the right time (see table, page 253), and plant it in the right way.

Fourth. Begin early to hoe and weed, and keep hoeing and weeding as long as necessary to insure a splendid crop.

Here is a formula which will be found to insure success: Intelligence, work and perseverance, good seed, rain and sunshine. Result: Quantities of fresh vegetables, a substantial money-saving, increased health, and the satisfaction of doing a patriotic service.

Garden Plan

Have a plan for your garden—drawn to scale on paper—before you start, to give proper order in planting and enable you to buy the right amount of seed in advance while the selection is good.

Put in one general group small plants like beets, onions, lettuce, carrots, radishes, and parsnips. In another general group put larger plants like corn, tomatoes, and potatoes. Spreading ground vines, like melons and cucumbers, which need wider spacing, should be put in another general group. The reason for this grouping is that the various plants in a group need similar general treatment as well as spacing.

In making a plan provide space in which to enter costs and yield of the various crops. This will give you a complete record, which will be useful another year. Another helpful use of the plan is that it will guide you in the rotation of next year's crops. For this purpose save your plan for next season.

Sunshine

In the location of a garden, it is not always possible to choose conditions as to sunlight. It is important, therefore, that in the arrangement of the various kinds of vegetables which are to be planted, due care should be given to providing the greatest exposure to the sun for those crops which need it most. Those plants which must ripen their fruits, such as tomatoes and eggplant, require the greatest amount of sunshine; while lettuce, spinach, kale, and other leaf crops require relatively less. Foliage crops must have at least three hours of sunlight a day and plants which ripen fruits at least five hours a day. This is important.

Vary from Last Year's Plan

It is important to remember that plant diseases and insects are apt to thrive in a spot in which they have become established. For this reason those who make gardens this year should take care not to place the individual crops in the spot in which the same crops grew last year. Varying the arrangement of the garden in this way will reduce the danger from disease and insects. The same vegetables in the same place each year exhaust certain food elements, and reduced yields are sure to result.

Surplus Products

At times, even with the best of planning, a gardener will find that his garden has matured more of some varieties of vegetables than can be used immediately. None of this excess should be wasted and there is no occasion for waste. If there is no ready market for the surplus it should be prepared for winter by either canning or drying. By modern methods either canning or drying may be done with little expense of time, trouble, or financial outlay. By using the cold-pack method, as small a quantity as a single can or jar may be put up in a short time. With proper instructions it is possible for you to dry a handful of peas or beans, sweet corn, a few sweet potatoes or turnips, or small quantities of many other vegetables with practically no expenditure of time.

PLAN OF GARDEN

50 by 75 feet

In this plan careful attention has been paid to proper relation of the season's crops and to a continuous supply of the more important vegetables.

Hot Bed	Cold Frame	Asparagus	Rhubarb

ARRANGEMENT OF SEASON'S CROPS

Peas, followed by late Tomatoes

Peas, followed by Celery

Onion Sets, followed by Turnips

Corn, followed by Spinach

Beans (bush), followed by Beets

Beets, ½ row; Carrots, ½ row, followed by Corn

Turnips, followed by Bush Beans

Potatoes, followed by Spinach

Spinach, followed by Potatoes

Cabbage, with Lettuce and Radishes between, followed by Carrots

Beans, Bush Lima

Chard, ¾ row; Parsley, ¼ row

Parsnips, ¾ row (radishes to mark row); Salsify, ¼ row
Corn, followed by Kohlrabi, ½ row; Cauliflower, ½ row
Peas, followed by Corn
Beans, Bush Lima
Early Potatoes, followed by late Cabbage
Early Tomatoes
Peppers, ½ row; Potatoes, Okra or Eggplant, ½ row
Potatoes
Potatoes
Pole Lima Beans
Pole Beans
Corn
Corn
Corn

Cucumbers	Squash (bush crook neck)	Squash (winter)	Musk-melon

Rows are 30 inches apart. If soil is very fertile rows may be closer.

Planting was begun at hotbed end of garden and plantings were made a few days apart to insure a constant supply of vegetables.

The Soil and Manures

The back-yard gardener must use the soil he has, but he can improve it if it is poor, and he must do this as far as possible. Stable manure will help even the richest soil, and you are not likely to use too much of it. During a single season professional gardeners apply as much as six inches of it. From 400 to 600 pounds can be used to advantage on a plot twenty by twenty feet. Coarse manure should be applied and thoroughly plowed or spaded under in the fall. In the spring, fine, rotted manure is applied, just before plowing or spading, preceding the planting of any crop. If the ground is fairly rich, and well-rotted manure is scarce, the manure may be scattered in the row only, and should be mixed into the soil before the planting of the seed.

Loam is the best garden soil. Sand, with manure, gives good results. Clay is hardest to work, but is greatly improved by well-rotted manure and vegetable matter—called humus. These should be well worked in with hoe and rake. Sifted coal ashes, entirely free from clinkers, will help loosen clay when mixed in, but will not remove an acid condition nor increase fertility.

Compost

Compost is especially desirable when quick growth is wanted. Compost is thoroughly rotted manure or organic material. It is prepared from six to twelve months before being used, by putting the manure and other material in piles.

Besides the usual waste of garden rubbish, there is a large waste of leaves, weeds, and the skins and other unused portions of fruits and vegetables. These should all be thrown on the compost pile to decay for use on the garden next spring. Destroy all plants which are diseased. The compost pile should be built up in alternate layers of vegetable refuse a foot thick and earth an inch or more thick. The earth helps to rot the vegetable matter when mixed with it.

If the pile can be forked over once a month when not frozen and the contents well mixed together, they will decay quite rapidly and be in good usable condition in the spring. The compost may be either spread over the garden and plowed under, or it may be scattered in the rows before the seed is sown. This

is, of course, not as rich as stable manure, but it is a good substitute.

Compost is also used as a top dressing during the growing season for hastening growth.

In planting a permanent garden, a space should be reserved near the hotbed or seed bed, and in this space should be piled, as soon as pulled, all plants which are free from diseases and insects. This applies to all vegetables and especially to peas and beans, as these belong to a group of plants which take nitrogen from the air, during growth, and store it in their roots. When these plants are decayed they will return to the soil not only much of the plant food taken from it during their growth, but additional nitrogen as well. Nitrogen in the soil is necessary for satisfactory leaf growth. The material so composted should be allowed to decay throughout the winter, and when needed should be used according to the instructions given for using compost. The sweepings of pigeon lofts or chicken coops make valuable fertilizer. When cleaning roosts from day to day add one-quarter as much acid phosphate as sweepings. When needed apply one pound of this mixture to every five square feet of ground, mixing it thoroughly into the soil.

Prepared sheep manure, where procurable at a reasonable price, is possibly the safest concentrated fertilizer. It should be used in small quantities rather than spread broadcast. Scatter it along the row before seed is sown or apply by mixing it with water in a pail, stirring the mixture to the consistency of thin mush, and pouring it along the rows of the plants.

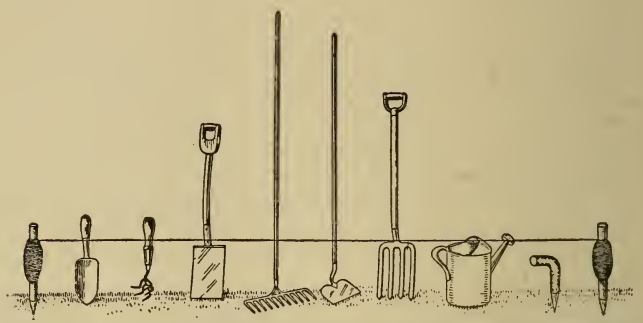
Green Manure

Green manure is useful as a fertilizer. It consists of green plants turned under by plowing or spading. Rye is the most satisfactory for this purpose. If planted in July or August, the crop may be turned under in the fall if early spring planting is desired. If planted later, it is usually turned under in the spring. When not turned under until spring, the growth will prevent the leaching of soluble plant food or the washing away of rich soil.

In sowing rye for this purpose, use at the rate of one pound of seed to a strip of ground fifty feet long and ten feet wide. If the ground is rough or hard, it should be cultivated just before

the seed is sown, and then cultivated again to cover the seed. Sow the seed between the rows of crops not yet gathered. Rye is very hardy and will sprout even though there is frost nearly every night. At a cost of about five cents for a pound of seed, a garden of ten by fifty feet can thus be treated to an application of green manure. The grass rye plants soon decay when turned under, and answer the same purpose as a light dressing of manure.

Green manure, however, should not be relied upon to do the work of stable manure, as it does not provide phosphorus or potassium.



Tools most commonly needed in a small garden. From left to right, between the balls of cord, they are: Trowel, weeder, spade, steel toothed rake, hoe, garden fork, watering pot and dibble.

Lime

Land which has long been unused, or land in lawns, is likely to be sour. To remedy this condition, apply evenly one pound of air-slaked lime or two pounds of ground limestone to every thirty square feet. This lime should be applied and raked in to a depth of two inches when the seed bed is being prepared in the spring. Instead of lime, two pounds of unleached wood ashes may be used. Do not apply lime at the same time as manure or mixed fertilizers, as it will cause loss of nitrogen.

Outdoor Hotbeds

For early planting a hotbed may be made, located in a sheltered spot with southern exposure, where it will receive a generous

supply of sun. A width of six feet is desirable and the length should be such as will enable the use of standard three by six foot hotbed sash. A simple, boxlike frame, twelve inches high in front, will hold the sash and give a better angle for the rays of the sun.

Dig a pit one and one-half to two feet deep, the size of the sash frame to be used. Line the sides of this with boards or planks, brick or concrete, and make a tile drain, or place stones on the bottom of the pit, to carry off surplus water. This pit is filled with fresh horse manure. The manure will require special treatment before being placed in the pit. It should be thrown into a pile and allowed to heat. When it has heated and is steaming, fork it over into a new pile, throwing the outside material into the center. When the new pile has become well heated, fork the material once more into a new pile. This will require from ten days to two weeks and is important in that it gets rid of excessive heat. After this process fill the pit with the manure, packed down firmly and evenly, level with the surface of the surrounding earth. On top of this manure make a covering of good garden loam three to four inches deep.

When the sash has been put in place the manure will generate heat, in addition to the heat that will be derived from the sun. After this heat has reached its highest point and dropped back to between 80 to 90 degrees F. the seed should be planted. Use the best seed obtainable. Until the seed germinates, the hotbed should be kept shaded to hold moisture. This can be done by spreading over the sash strips of old carpet, heavy cloth, or newspapers. After germination strong light will be needed. The plants must be watered each morning on clear days and the sash left partially open for ventilation, as it is necessary to dry the foliage to prevent mildew.

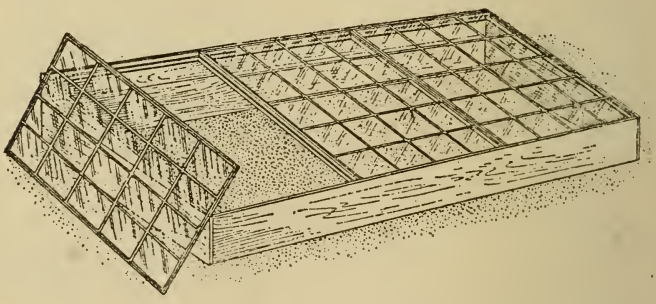
Proper ventilation is essential to the production of strong, healthy plants. The sash should be raised during the warmest part of the day on the side opposite the direction from which the wind is blowing. By opening it in this way instead of facing the wind, the hotbed receives fresh air without receiving direct draft. On cold days raise the sash slightly three or four times a day for a few minutes only. In severe weather cover the beds with mats, straw, or manure to keep in as much heat as possible.

About two weeks before transplanting time the sash should be removed during the day to "harden" the plants. While in the hotbed the plants should be thoroughly watered, but the water should not reach the manure underneath. Early morning is the best time for watering, so that the plants will be dried before night.

An outdoor hotbed of this character should be started in the early spring—February or March.

The Cold Frame

A cold frame is useful for hardening plants which have been started in the hotbed. It is built like a hotbed, but on the surface of the ground, without the pit or manure. Good, rich soil should be used and the soil kept slightly moist. In mild climates the cold frame may be used instead of a hotbed for starting plants. It is also used in the fall and early winter for growing lettuce, radishes, carrots, and parsley.



Procure Seed Early

Seed shortage was a handicap to many gardeners last year. This year the planting of gardens will be increased and the demand for seed even greater than in 1918. It is important, therefore, that the home gardener should procure his supply of seed early—well in advance of planting time. Be sure to patronize a reliable dealer, as quality is vital.

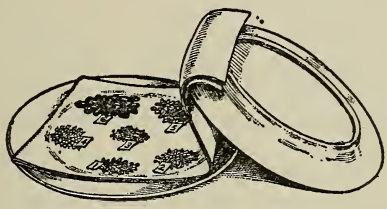
Use Seed Sparingly

Home gardeners often plant seed thickly to make sure of a good stand. This is a wasteful method, excepting with such vegetables as will produce young plants which may be used as greens. The better way is to plant according to the directions given in the planting table.

The pronounced seed shortage this year makes it imperative that no seed be wasted.

Testing Seed

A simple test will give useful advance information of the germinating value of seed. This test is useful as enabling the gardener to determine whether or not seed have been properly cured and are otherwise in good condition. Seed which are too old or have been kept under unfavorable conditions are unsatisfactory.



To test, plant twenty-five to fifty seed of each variety in an outdoor seed box, or place between moist blotters or cloth between two plates. Germination should take place within two to eight days and the number of seedlings which grow will show the percentage of germination.

The seedlings should be kept for planting to prevent waste.

How Much Seed to Buy

The following amounts of seed will plant in each case a garden row 100 feet long. Measure your rows and buy accordingly. Also compare your figures with planting table on page 253.

String Beans	½ to 1 pint	Eggplant	⅓ ounce
Lima Beans	½ to 1 pint	Kale, or Swiss Chard	½ ounce
Cabbage	¼ ounce	Parsley	¼ ounce

Carrot	1 ounce	Parsnip	½ ounce
Cauliflower	1 packet	Vegetable Oyster (Salsify)	½ ounce
Celery	¼ ounce	Onion Sets (Bulbs)	1 quart
All Squash	½ ounce	Onion Seed	1 ounce
Beets	2 ounces	Peas	1 to 2 pints
Sweet Corn	½ pint	Radish	1 ounce
Lettuce	½ ounce	Spinach	1 ounce
Muskmelon	½ ounce	Tomatoes	⅛ ounce
Cucumber	½ ounce	Turnip	½ ounce

One or two pecks of early potatoes and one-half to one bushel of late potatoes are enough to plant to supply four persons.

Indoor Planting

Earlier crops can be secured by planting certain seed indoors and setting the young plants out in the open garden after the weather becomes warm. This may be done with tomatoes, cabbage, lettuce, cauliflower, peppers, and eggplant.

Any wooden box, shallow and wide, will make an indoor garden. Put one inch of gravel or cinders in the bottom for drainage, and fill to the top with good soil. Rows of plants may be two inches apart.

Plant eight or ten seed to the inch, keep the soil damp, and set the box in a window. When the plants are an inch high transplant them to other seed boxes, spacing the plants two inches apart. This insures sturdy plants with good root systems.

Transplanting

Before transplanting the plants to the garden, set the box outdoors, in mild weather, to harden the plants. Set out each plant with a ball of the box dirt sticking to the roots. Thorough watering several hours before transplanting causes the earth to stick as required.

If the root system is broken in the removal, trim away some of the larger leaves of the plants. In moist ground open a hole with a trowel. Make the hole larger than is needed to hold the roots and a little deeper than the root grew. Place roots in hole, and, with the hands, pack the soil firmly around the plant. In dry soil pour a pint of water into each hole before inserting

PLANTING TABLE

Vegetable	Quantity required for 100 feet of row	Distance Apart in Inches		Depth of Planting Inches	Time of Planting	Mature (In days except as noted)
		Rows	In Row			
Asparagus, seed	1 oz.	12 to 24	3 to 5	½ to 1	Early spring	3 to 4 yrs.
Asparagus, plants	60 to 80	36 to 48	15 to 20	8 to 10	Early spring	1 to 3 yrs.
Beans, snap	½ to 1 pt.	20 to 24	4 to 6	1	April to August	40 to 65
Beans, pole	½ pt.	36 to 48	Hills 24–36	1	May and June	50 to 80
Beans, Lima, bush	½ to 1 pt.	18 to 24	4 to 6	1	May and June	60 to 90
Beans, Lima, pole	½ pt.	36 to 48	Hills 24 to 36	1	April to June	60 to 80
Beets	2 oz.	12 to 18	5 or 6 to ft.	1 to 2	April to July	60 to 80
Brussels sprouts	¼ oz.	24 to 30	16 to 24	½	April to August	60 to 80
Cabbage, early	¼ oz.	24 to 30	12 to 18	½	March and April (Start in hotbed during Feb.)	90 to 130
Cabbage, late	¼ oz.	24 to 36	16 to 24	½	May and June	90 to 130
Carrot	1 oz.	18 to 24	6 or 7 to ft.	½	April to June	75 to 110
Cauliflower	1 packet	24 to 30	14 to 18	½	April to June (Start in hotbed during February or March)	100 to 130
Celery	¼ oz.	18 to 36	4 to 8	⅛	May and June. (Start in hotbed during Mar. or April)	120 to 150
Chard	½ oz.	18 to 24	4 to 6 to ft.	½	April to July	60 to 80
Corn, sweet	½ pt.	30 to 36	30 to 36	1 to 2	May to July	60 to 100
Cress, upland	½ oz.	12 to 18	4 to 5 to ft.	½ to 1	March to May	30 to 40
Cucumber	½ oz.	48 to 72	48 to 72	1	April to July	60 to 80
Eggplant	⅓ oz.	24 to 36	18 to 24	½ to 1	April and May. (Start in hotbed during Mar.)	100 to 140
Endive	1 oz.	18	8 to 10	½	Midsummer	90 to 180
Horse-radish	70 roots	24 to 30	4 to 6	3 to 4	Early spring	1 to 2 yrs.
Kale	½ oz.	18 to 24	6 to 8	½	Early spring and August and September	90 to 120
Kohlrabi	¼ oz.	18 to 24	4 to 6	½	April to August	60 to 80
Lettuce	½ oz.	12 to 18	4 to 6	½	March to September	60 to 90

Muskmelon	½ oz.	72 to 96	Hills 72	1	April to June. (Start early plants in hotbed during March)	120 to 150.			
Okra, or gumbo	2 oz.	36 to 48	24 to 30	1 to 2	May and June	60 to 90			
Onion, seed	1 oz.	12 to 18	5 or 10 to ft.	½ to 1	April and May	130 to 150.			
Onion, sets	1 qt.	12 to 18	4 or 5 to ft.	1 to 2	Autumn and March to May	90 to 120.			
Parsley	¼ oz.	12 to 18	3 to 6	⅛	Early spring and September	90 to 120.			
Parsnip	½ oz.	18 to 24	4 or 6 to ft.	½ to 1	April and May	125 to 160.			
Peas	1 to 2 pts.	36 to 48	15 to ft.	3 to 4	March to June	40 to 80			
Pepper	⅛ oz.	18 to 24	15 to 18	½	May and June. (Start early plants in hotbed during March)	100 to 140.			
Potato, Irish	5 lbs.	24 to 36	14 to 18	3 to 5	March to June	80 to 140.			
Potato, sweet	75 slips.	36 to 60	14	2 to 3	March to June	100 to 130.			
Pumpkin	½ oz.	96 to 144	96 to 144	1	May	100 to 140.			
Radish	1 oz.	12 to 18	8 or 12 to ft.	½	March to September	20 to 40			
Rhubarb, plants	33	36 to 60	36 to 48	*NOTE	Early spring	1 to 3 yrs.			
Rutabaga	¼ oz.	18 to 24	6 to 8	½ to 1	May and June	60 to 80			
Salsify	½ oz.	18 to 24	2 to 4	½	Early spring	120 to 180.			
Spinach	1 oz.	12 to 18	7 or 8 to ft.	1 to 2	September or very early spring	30 to 60			
Squash, bush	½ oz.	36 to 48	Hills 36 to 48	1	April to June	60 to 80			
Squash, late	½ oz.	84 to 120	Hills 84 to 108	1	April to June	120 to 160.			
Tomato, seed	⅓ oz.	36 to 48	30 to 36	½ to 1	May and June. (Start early plants in hotbed during Feb. and Mar.)	100 to 140. 80 to 100.			
Tomato, plants	33 to 40	36 to 48	30 to 36						
Turnip	½ oz.	18 to 24	6 or 7 to ft.	¼ to ½	April and August	60 to 80			
Veg. marrow	½ oz.	96 to 144	Hills 96 to 108	1 to 2	April to June	110 to 140.			
Watermelon	½ oz.	96 to 120	96 to 120	1	May	100 to 120.			

* NOTE.—Set rhubarb plants so that growing tips are at surface of ground.

Absolute dates for planting can not be given, because of variations in seasons from year to year and varying climatic conditions in different sections. For general guidance see "When to Plant."

plant. Rake some dry earth about the surface surrounding each plant to hold the moisture.

Transplanted plants cannot stand strong sunshine at first and cloudy days or late afternoon are preferable for transplanting. In bright weather place newspapers over them for a day or two, making tents of the papers, in the shape of an inverted V.

A home-made paper pot, a round, bottomless paper band, or a berry box, filled with soil, should be used to produce plants for a hill of cucumbers, squash, melons, or other "vining" plants which are started indoors, as these do not stand transplanting if the roots are disturbed. The pot or other holder may be set into the ground without disturbing the roots. Tomatoes, egg-plants, and beans may also be started in this way.

When to Plant

When heavy frosts are over, plant early peas, onion sets and seed, early potatoes, kale, lettuce, and spinach. All of these will stand light freezing except potato plants, which should be covered with dirt when frost threatens.

When frosts are about over, plant radishes, parsnips, carrots, beets, late peas, and early sweet corn, and set out cabbage and cauliflower plants. (An old and useful rule is to "plant corn when the oak leaves are the size of a squirrel's ear.")

When all the frosts are over and apple trees are in bud, plant string beans and late sweet corn, and set out a few early tomato plants from the indoor boxes.

When apple trees have finished blossoming, plant cucumbers, melons, squashes, and lima beans, and set out the rest of the indoor plants.

Seed Beds

Plants for second crops may be raised in an outdoor seed bed occupying small space. These plants may be grown while the space allotted to them in the garden plan is still in use for earlier crops. The rows of seed are not spaced so closely as in boxes used inside the house. If the plants crowd each other too much, some of them may be removed and transplanted to another part of the garden. The seed bed plan is useful for such crops as cauliflower, Brussels sprouts, late cabbage, and the like.

Fall Planting

It is well to plant a fall garden of some crops, for in spite of the risk of injury by early frost the chances are in favor of satisfactory results. There can be no absolute rule as to the time of planting. The probable time of the first frost in each locality must be taken as a general guide. For planting in August, and possibly even in early September, the following vegetables may be grown:

When first frost may be expected between September 15th and September 25th: lettuce, spinach, turnips, parsley, and multiplier onions. (Kale and radishes may be risked.)

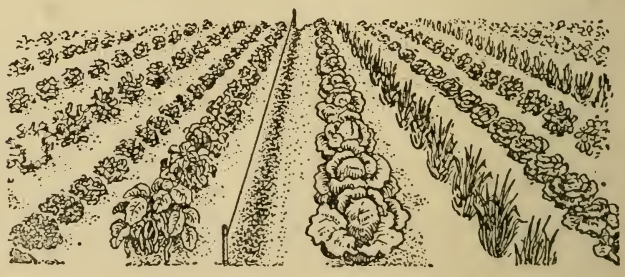
When first frost may be expected between September 20th and October 5th: kale, lettuce, parsley, multiplier onions, radishes, spinach, and turnips. Beets and chard for greens.

When first frost may be expected between October 5th and October 15th: beets for canning, carrots, kale, multiplier onions, spinach, chard, endive, lettuce, radishes, and turnips.

When first frost may be expected between October 15th and October 25th: any of the vegetables mentioned in the preceding lists. (String beans may be risked.)

Laying Off Rows

Straight rows add to the garden's beauty and make cultivation easier. To make the rows straight, stretch a stout string between stakes and follow it with the point of a hoe, with a wheel hoe, or with the end of the handle of the rake or hoe, to open up the row. The plan is suggested in the illustration.



Succession of Crops

Nature generously provides for more than one crop on the same soil. Vegetables which reach maturity early in the season should be followed by later crops of the same vegetable or by rotation of other kinds. Onions to be used green may be grown in rows which are to be occupied by late tomato plants, as a few of the onions may be removed to plant the tomatoes. Radishes mature early and as they are harvested the space may be used for cabbage, lettuce, cauliflower, Brussels sprouts, and other plants. Many combinations of this kind may be made to good advantage.

For Continuous Crops

With some of the important vegetables a series of plantings is desirable. Of string beans, lettuce, radishes, spinach, sweet corn, peas, beets, and carrots there should be several successive plantings, two or three weeks apart, to provide a fresh and continuous supply all season.

Depth of Planting

Do not plant too deeply. The old rule is to plant to a depth of five times the thickness of the seed. This, however, is not an absolute rule and is not safe in all cases. Consult planting table on Page 253 for depth.

Hoeing

When the green rows appear, it is time to start hoeing or cultivating. Never hoe or cultivate deeply—an inch or two is deep enough—but stir the ground frequently, and always after rain or watering, as soon as it is dry enough. The hoeing must not be done after rain or watering when the ground is still wet enough to cause the muddy earth to pack like cement, as this causes the earth to cake and dry out altogether too rapidly, which is undesirable.

Frequent hoeing causes the formation of a dust layer which prevents the soil underneath from drying out. The garden should always be kept free from weeds, as these, if permitted to grow, consume plant food and moisture needed by the plants.

Watering

A plentiful supply of moisture is essential. If there is not sufficient rainfall, the moisture should be provided by watering the garden. In doing this it is better to soak the ground once a week than to sprinkle every day. Late afternoon is the best time to sprinkle.

To moisten the surface is not enough. There must be a thorough wetting. If pipe connections are available a garden hose is the best means of watering. One of the most satisfactory methods is to open small furrows between rows and allow water to run into these trenches, raking the earth back into place several hours later and make a mulch, after the water has thoroughly soaked in. The sprinkling pot will serve if hose is not available, but is more laborious. Overhead sprinklers are very satisfactory. They consist of pipes mounted on supports extending the length of the area to be watered. Holes are drilled at intervals of three to four feet and small nozzles are inserted which yield a spray-like misty rain when the water is turned on. By turning the pipes and also changing the position of them, it is possible to water an area of any size.

In home gardens proper drainage is often disregarded. Drainage improves the soil by allowing air to enter; by raising the temperature of the soil; by rendering the soil more porous and granular; by enabling the roots of plants to grow deeply into the soil, and by allowing earlier cultivation in the spring.

Blind ditches, partly filled with stones or other material covered with soil, or open ditches, will be found satisfactory for the home garden. They should be along the lowest level of the garden, and have suitable outlet. Lacking an outlet, lay tile twelve inches below surface of garden, slanting toward a hole ten feet deep and five feet across, in center of garden. Fill this, two-thirds to the top, with stones, covering stones with clay and covering the clay with loam.

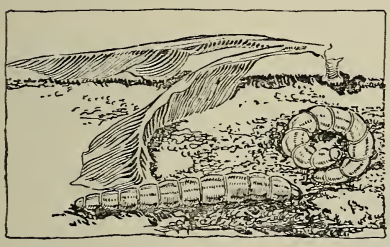
Common Garden Insects and Their Control [2]

ARTHUR GIBSON

Fully twenty per cent of the annual value of all vegetable crops grown in Canada represents the loss from ravages of insects. This loss easily totals several millions of dollars each year. Much of this could be saved by adopting the measures of control here recommended. It is possible in this Manual to refer only to some of the more important garden pests.

CUTWORMS

These smooth, cylindrical caterpillars are about one inch or more in length and in color are of some dull shade similar to the ground in which they hide during the day. The moths that lay the eggs from which the cutworms develop are of a grayish or dull brownish shade, and measure, with the wings spread, from one to two inches in width. The eggs, pale in color, and less than one twenty-fifth of an inch in diameter, are deposited in clusters on leaves of trees, shrubs, weeds, and grasses. Injury by the cutworms is effected mostly in the early part of the season when plants are young. As their popular name indicates, these caterpillars have the habit of cutting off the plants during the night, near the surface of the ground or a little below it.



As soon as their presence is detected the following poisoned bran bait should be used:

Bran	20 pounds
Cheap molasses	1 quart
Paris green or white arsenic	½ pound
Water	2 to 2½ gallons

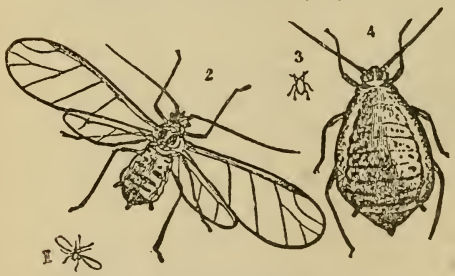
[2] Reprinted by permission from The Canadian Standard Efficiency Training "Manual for Trail Rangers," copyrighted, Canada, 1918, by the Committee on Canadian Standard Efficiency Training.

Mix the bran and Paris green (or white arsenic) thoroughly while dry, in a wash tub. Dissolve the molasses in the water and wet the bran and poison with the same, stirring well so as to dampen the bran thoroughly.

The mixture should be applied *thinly* as soon as cutworms' injury is noticed. It is important, too, that the mixture be scattered after sundown, so that it will be in the very best condition when the cutworms come out to feed at night. For protecting hoed crops, such as beets and turnips, a simple method is to have a sack filled with the bran hung around the neck and by walking between the rows, and using both hands, the mixture may be scattered along the row on either side. In small gardens a small quantity of the poisoned bait may be put around each plant, but should not touch the plants.

Plant Lice

There are few kinds of vegetables or other garden plants which are free from injury by the various species of plant lice, known also as "Aphis" and "Green Fly," some kinds of which are green, others dark colored, and some even red. All are sucking insects and live solely on the juice which they suck from the plants.



Plant Lice. 1 and 2, male; 3 and 4, female; 1 and 3 about life size

Garden plants should be examined for their presence at frequent intervals in early spring. The under side of leaves and the upper portions of stems are the chief places. When these insects are noticed the plants should be sprayed with an insecticide which kills by contact, such as whale-oil soap or nicotine sulphate (forty per cent). Whale-oil soap, which is dissolved in boiling water, should be used in the strength of one pound to six gallons of water for greenish plant lice and in the strength of one pound to four gallons of water for dark plant lice. Nicotine sulphate sold by seedsmen should be used in the strength recommended on the can.

Flea Beetles

The small, dark-colored "flea beetles," so called from their habit of leaping or jumping, are from one-twentieth to one-quarter of an inch in length. They eat holes in the leaves of turnips, radishes, potatoes, tomatoes, cabbages, beans, and other vegetables. They are most injurious in spring, at which time the young seed leaves are often very quickly destroyed.



Infested plants should be sprayed with an arsenical mixture containing either Paris green or powdered arsenate of lead. The former should be used in the strength of four ounces to forty gallons of water, with about half a pound of fresh lime added. Where only a few plants are being treated one teaspoonful, with about the same quantity of lime, to a pail of water, is sufficient. Powdered arsenate of lead is used in the strength of two pounds to forty gallons of water. For use in small gardens one dessert-spoonful is sufficient for one gallon of water.

Root Maggots

In spring, when cabbages and cauliflowers are set out or when radishes and onions appear above the soil, small flies, somewhat resembling the common house-fly, but rather smaller and more slender, may be seen flying about close to the ground, depositing small white eggs on the stems of the plants or adjacent thereto. These eggs hatch in a few days and the small white maggot, known as a root maggot, at once burrows and destroys the roots.

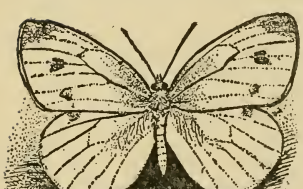
Cabbages and cauliflowers may be protected from injury by placing a disc made of one-ply tarred felt-paper around the stems at the time the plants are set out. Square discs for this purpose are easily cut out with a sharp knife. They should be two and a half inches square with a slit running from one side to about one-quarter of an inch beyond the center and a cross cut made at the center, extending one-quarter of an inch on either side. In placing the disc one side is raised sufficiently to allow the

parts of the star in the center of the disc to point upwards and thus fit close to the stem. The whole disc is then pressed down firmly so that it will rest evenly on the ground.

In small gardens, radishes and onions may be largely protected by watering them, once a week until they are ready for the table, with a decoction of fresh pyrethrum insect powder or wild hellebore, two ounces to each gallon of water. The first application should be made when the plants appear above the ground.

The Cabbage Butterfly

The green caterpillar of the white butterfly, generally called the cabbage worm, destroys large numbers of cabbages every year. The butterflies are common in gardens, where they may be seen depositing their eggs on the leaves of cabbages, cauliflowers, and turnips. Dusting the infested plants with fresh pyrethrum insect powder and cheap flour (air-slaked lime or other dry diluent), one part of the former in four of the latter, is a useful remedy. The powder and flour, after thoroughly mixing, should be kept in a tight vessel for twenty-four hours before using. The mixture may be applied with a duster sold by seedmen, or from a cheesecloth bag on the end of a short stick, the operator holding the bag over the plants and tapping the stick with a cane held in the other hand as he walks along the rows.



The Colorado Potato Beetle

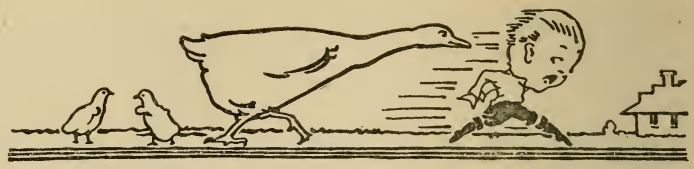
Towards the end of May and early in June the female potato beetles lay clusters of bright, orange-colored eggs on the under sides of the leaves, which soon hatch into the well-known dark-colored grubs. There are several generations during the season. We have found the following poisoned spray an excellent one to control this insect: eight ounces of Paris green and one

and one-half pounds of powdered arsenate of lead to forty gallons of water. Both Paris green and arsenate of lead may be used in the well-known Bordeaux mixture and if this is done the above proportions are suitable for forty gallons of the mixture. Such a poisoned Bordeaux mixture not only destroys the beetles and grubs but also protects the plants from blight and rot. Applications should be made in the beginning of June, when the beetles are first seen, then early in June and about August 1st, 15th, and 31st.



The Potato Beetle and its work; grubs and adults





CHAPTER XV

PETS[1]

Dogs, Pigeons, Chickens, Rabbits

Dogs

Every boy loves a good dog, but not every boy knows a good dog from a poor one. There are dogs and dogs, from the five-pound toy terrier to the gigantic two-hundred-pound St. Bernard.



Danuin says that all of the domestic dogs of the world descended from two well-defined species of wolf. Our northern Indians and White Trail Rangers through the Canadian woods who use dog trains know that their dogs will breed freely with the wolves. It has taken many years of breeding to develop the intelligent animals that we now possess. A breed of dog something like the greyhound is figured on the Egyptian monuments of 3400 B. C. and long before the historical period of Europe there is evidence that man possessed the dog.

There can be no doubt that the existing varieties of the dog have been produced by crossing and selection, chiefly aided by the influence of all that enters into the term "*environment.*"

Every breed of dog now has a "standard," which is a description of the characteristics of that breed. There are many books about dogs, which may be obtained from any progressive book-dealer. The boy who wants to exhibit his dog must know the judging points. These are based on an imaginary perfect dog of that particular breed. In selecting a dog it is well to remember

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English Setter

that a mongrel costs as much to keep as a thoroughbred, and while the former may be as intelligent as any blue-blood, there is always more satisfaction in the possession of a handsome, well-bred animal.

The individual taste of each boy should decide his selection of a dog, but, generally speaking, the city and town boy will do well to select one of the smaller or medium-sized breeds with short hair. They are less troublesome around the house and neighborhood. If a thoroughbred dog is purchased, care should be taken to get the pedigree.

The housing of a dog is most important. If a dog is to look well and show off to the best advantage, he must have a comfortable home. It must be well ventilated, clean, and have a southern exposure that will allow the health-giving sunshine to do its work. Coarse straw forms the best bedding. Never use hay or fine grass. The kennel should be cleaned each morning.



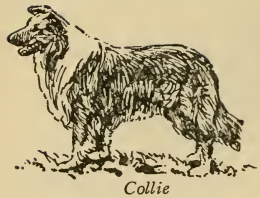
Scottish Terrier

Puppies may be taken from their mother at the age of five to seven weeks. They should then be given milk five or six times a day. Soon a little bread or puppy biscuit may be soaked in the milk. At six months scraps from the table may be given with an occasional ration of meat. The uneaten food should always be removed as soon as the dog has finished. Three meals a day are now sufficient and this can later be tapered off to one good meal each evening, with a small "hand-out" at breakfast time. A dog should be taught house manners soon after he is four months old. A little patience, tempered with firmness, will be necessary.



Greyhound

Two extreme views have long been entertained in regard to the training of a dog: the one that he is a wild, wayward creature to be "broken"; the other that he needs no special correction if properly taught at first. Neither is quite correct.

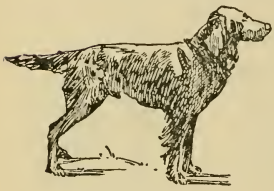


Collie

A puppy, like a boy full of life, tends to do exactly as his impulses urge him till the highest mature power, a desire to please his master, is substituted. It follows that a puppy cannot be too soon led to understand that he has a master, kind, honest, intelligent, and firm.

By observing the following principles, almost any puppy may be taught to perform several entertaining tricks such as to roll over, sit up and beg, jump through a hoop or over a stick, retrieve a ball or stick, and walk on his hind legs.

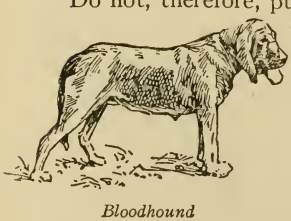
The boy who is successful in training his dog will in all probability be just as successful in bringing up his own boys when he becomes a man, because the puppy must be treated very much as one should treat a boy.



Irish Setter

It is a well known law of the nervous system that what has happened once is likely to occur again under the same circumstances; hence, in the training of the puppy, first experiences are of great importance and they should not be allowed to form habits which will later need correction. Let him from the first be encouraged in cleanliness, self-respect, love of esteem, respect for the rights of other puppies, and obedience to his master.

Very early begin to instill into him lessons of restraint, but only for the briefest periods, for he is yet weak in brain and will power, though strong in instincts and impulses. The master or trainer must not be associated in his mind with unpleasantness. Do not, therefore, punish him, but let him learn almost unconsciously that certain actions bring certain pleasures. It is well to carry a bit of biscuit, cheese, or a very small particle of meat to reward him for first performances. Later a loving pat will suffice.



Bloodhound

The trainer should never undertake what he is not reasonably sure of accomplishing, and the first aim should always be to get

the dog's attention and interest. If it is evident that he understands, he must be made to obey; gentle compulsion when once the purpose is understood may be exercised, but he must not be whipped, as that will make the whole set of associations unpleasant. Gently drag him by the neck or carry through the performance, and then remove him at its completion, as if he had done it voluntarily. He must be made to feel that obedience to what is right brings pleasure and that disobedience produces a sense of unpleasantness.



Fox Terrier

It must be remembered that all lessons require frequent repetition; "little and often" is one of the first principles in training. With puppies, as with boys, example is strong for both good and evil. A steady, old, well-trained dog is invaluable, while a disobedient, headstrong one will most assuredly ruin a good puppy.

If a boy intends to enter his dog in the show he should know that many prize winners have been beaten, not because they did not have the points, but because of poor show condition. This means perfect health—the result of good housing, good food, plenty of exercise, fresh air, and cleanliness.

The grooming of show dogs should be regular. Ten minutes should be devoted to this every day, first with a dandy-brush, then with a rough towel. Long-haired dogs should be combed frequently and given an occasional application of some hair tonic.

Washing should not take place more often than once a week, and at least two days should be left between the last wash and the show to enable the hair to recover its luster. Care should be taken to dry thoroughly all long-haired dogs before putting them in the kennel. It is not sufficient for a dog new to the show ring simply to be in good condition. He must go through a suitable course of training, otherwise he will refuse to show himself off properly in the ring and entirely fail to exhibit his good points.

He must be practiced, preferably in the presence of other dogs, in all the routine of the ring. Teach him to lead and to stand still when required, and to start out well, covering a lot of ground like a well-trained hackney. Some owners fit up miniature show rings and benches and thus accustom their dogs to the ordeal.



Trumpeter

PIGEONS

There is nothing dearer to the heart of a boy than the ownership of a dog, rabbits, guinea pigs, or pigeons. Giving care and attention to such pets brings its own reward. When a boy loves his pets he does not need to be told to be kind to them. He will tenderly care for these beautiful creations of God and bestow on them the attention that their helpfulness calls for.

In raising any kind of pets one of the chief joys is in exhibiting them at a show. It is there that one meets others interested in the same hobby and the exchange of ideas as well as exchange of stock is a source of intense delight.

In the raising of pigeons a boy may choose three objectives—raising them for show purposes, for racing, or for the market as squabs. Those who want to breed show birds have many varieties to choose from and the decision with each boy should rest on his own individual taste. If one goes into the racing game he is limited to the homers, of which there are several types. This is a most fascinating pastime, provided that several boys in a community are engaged in it. Fattening pigeons for table use may prove more profitable, but the average boy revolts against the thought of slaughtering the pretty little creatures which have given him such happiness.



Carrier

Any boy with a taste for carpentering and a slight knowledge of tools can erect a pigeon loft. Very often available space will be found in the upper part of a woodshed, chicken-house, the barn, or stable, in which case an opening in the south side of the building with a trap door and a landing shelf will be all the outside construction necessary. Inside, the partition should allow for a

space about five by ten feet and four to six feet high. This will accommodate from six to eight pairs of birds. The back should be boarded in, one end covered with fine wire netting, and a door made in the other end. This will provide plenty of ventilation and allow free access for cleaning.

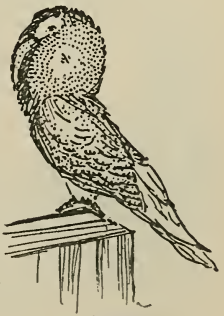


Pouter

Perches should be put up along the back of the loft. The best kind of perches are shaped like the letter-boxes in a country store, each box perch allowing room for one bird only. These should be made of boards four inches wide. The height and width will depend on the size of the breed of pigeons. Place the perches in the upper part of the loft, leaving plenty of space for the nesting shelves underneath. These should be arranged in two or three rows, extending the full length of the back of the loft. Make them one foot wide, three feet long, and eighteen inches apart. Two doors, each one foot wide, should be placed at each end of every nest, thus leaving a space for one foot in the center. The birds will lay alternately at either end of the nest behind the doors, which can be opened for cleaning. If an earthenware nest pan with some pure sawdust is provided it will be possible to keep the nests much cleaner than if the birds are allowed to build on the shelves.

Three pairing-up pens one foot deep, two feet long, and two feet high should also be built. They may be placed under the nest shelves.

If the loft cannot be built in some building, a suitable place may be erected in any backyard, following the same instructions with the exception of the height, which should be at least six feet, and instead of leaving one end covered with wire netting, a hinged window three feet square should be placed there. This space should be covered with the netting, so that when the window is hinged back for ventilating purposes the birds cannot escape.



Jacobin

If the start is made with young birds, all that is necessary is to keep them shut up for a couple of weeks.



Magpie

The birds it is decided to pair together should be placed in the pairing pens. When it is seen that they have mated they may be allowed to take possession of one of the nest-boxes. Two eggs are laid, which take from seventeen to nineteen days to hatch. The hen bird covers the eggs most of the time, but each morning the rooster takes his turn while his mate gets some food and exercise. The young are fed by the old birds with a secretion that comes from the crop.

Barley is considered the best grain for pigeons, although any ordinary chicken feed is quite suitable.

The war brought the homing or roving pigeon before the attention of the general public. However, for many years long distance pigeon-flying has been an outstanding hobby throughout Europe, especially in Belgium.



Fantail

In selecting racing birds the color is of no importance, but wings should be strong, broad, and long, the chest deep, giving good lung power, and the skull broad, showing a well-developed brain. Another point that should be noted is the prominence and brightness of the eyes.

In order to improve the strain, the fastest rooster in the loft should be mated with the fastest hen. In this way birds are bred that will beat the performances of their parents.



Short-faced Tumbler

In training young birds for racing, start them first about a mile from home; a few days later double the distance, taking them in the same direction. By doubling the distance each time it will not be long before the birds are flying from fifty to seventy-five miles. This is far enough for any bird under one year, but two-year-olds may be sent three hundred miles. Birds intended for longer flights must be older and more experienced.

Among the show pigeons, *the Fantail* is the best

known. The chief points in judging are the tail and back, which give the bird a proud air.

The Pouter: The carriage, the legs, and the crop are important matters in these birds. The best pouters stand upright so that the eye is in a vertical line with the lower legs, which must be covered with feathers to the feet. The size and roundness of the crop are given no little consideration by the judge.

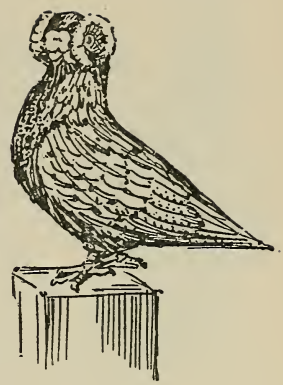
The Jacobin: The ruff or hood of this well-dressed little bird is the chief point of attention for the fancier, although the general carriage is also important.

The Magpie: The colors and markings of these birds count for much, although they come in black, duns, silvers, reds, yellows, and blues. They are very beautiful. The carriage is graceful, the head long and thin and round on top. The eyes are white, with an intensely black pupil.

The Barb: This is a difficult pigeon to breed. The eye wattle forms the side of the head. The beak wattle is not supposed to be large. The legs are short, giving the bird a stubby appearance.

The Tumbler: There are many varieties of this pigeon, which may be classified under the long-faced and short-faced types. The most popular are the Beard, the Mottled, and the Almond.

The Turbit: This small, erect bird is white, with the exception of its wings which may be black, yellow, blue, or red. The peak on the head springs from the mane and extends slightly beyond the top of the skull. The larger the gullet and frill the better.



Barb



Turbit



Dragon



English Owl

The Antwerp: There are three varieties—the short, medium, and long-faced. The colors vary and the head is the judging feature of this breed, which must be large and well rounded, the beak short and stubby. The chest must be broad and the entire bird large and well developed.

The Dragon: This is a very active, hardy bird with a head that receives most attention in the show pen. The beak is thick and the wattles broad at the base, narrowing towards the point of the beak. The neck is short and thick. The colors include blue, red, yellow, grizzles, silvers, and checked.

The Owl: This pigeon is small, with a well-rounded head. The beak should be broad and short. The legs are short and the bird should exhibit his frill with a suggestion of pride. The colors vary.



Homer

The Homer: The Show Homer is a smart-looking, active pigeon that is hardy enough for any boy to experiment with. There are several colors and the head is the most important of the judging points. It must be round from the back to the top of the beak and the beak must follow on with a curve, so as to give the appearance of a circle from the points of the beak to the back of the head.

Keeping a Pen of Poultry

It is doubtful whether there is any line of work in which a boy may engage which will afford greater opportunities of becoming acquainted with nature and develop keener powers of observation than looking after a flock of chickens. It provides a good chance to do something worth while in helping to increase the national food supply; it gives a splendid introduction to a business training in a small way, and it furnishes enough eggs for breakfast almost the year round.

A liking for chickens, a natural adaptability for looking after them, and willingness to work, form the foundation for successful poultry-keeping. Success depends entirely on the faithful performance of all the required details. Chickens respond quickly to good treatment. They will also show the effects of neglect more quickly than any other kind of stock. The things that need doing can only be seen if the boy is fully alive to what is going on around him, and it is noticing and caring for the little things that will bring success.



Monarch of the Roost

Chickens respond more quickly to good treatment than any other class of stock. A boy will find a flock of hens one of the most interesting lines of study. Each bird has an individuality of its own, the same as a human being. There are no two birds alike. Chickens are more or less sociable in nature and appreciate frequent visits to their house. A good poultryman gets to know each one of his birds, and they get to know him. The fancier studies the habits or traits of character in each of his birds, and then proceeds to fit and train each one so that it will show to best advantage in the show room. A few minutes spent in the poultry-house each day will do wonders in the way of helping one to know the nature and habits of the birds.

With many a boy the question of earning a little extra money is an important thing. Poultry-keeping will lend itself to this. Quite a good-sized bank account can be earned in a few years by keeping poultry. The returns in eggs depend almost entirely on the work done with the flock and how they are fed and housed. Under proper conditions any flock can be made to pay well for the feed, time, and labor expended.



Rhode Island Red Hen

By way of developing keener powers of observation we might point out that there are no less than fifty recognized pure-bred breeds of poultry, and within these breeds over two hundred varieties and sub-varieties. This classification is made on type or shape, color, feather markings, type of comb, color of ear-

lobes, color of legs and feet, and color of eggs laid. A breed is generally known by its type or shape, and the general characteristics such as comb, ear-lobes, and color of legs and feet. A variety within a breed is generally known by its color. In almost all breeds there is a white variety, a buff, and a black. A boy can get a fine opportunity to develop keen powers of observation by studying breeds and varieties. This in turn should be followed by a study of the uses of the different breeds. Some are specially adapted for egg production, others for meat production. We have breeds which will lay well and also dress out a good-sized carcass for table use. These are known as general-purpose or utility breeds.



Plymouth Rock Rooster

Coming to the practical side of poultry-keeping, there are a few factors which must be considered essential. The house, the stock, the feed, and the care, are the four most important.

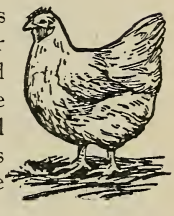
A good poultry-house must be well lighted, have plenty of fresh air, be well ventilated, free from draughts, and dry. In addition, it should not be too costly, and yet should be in keeping with the surroundings. It is not necessary to build it so that water will not freeze. Fresh air, even if it is cold, will not hurt hens, provided it is dry air and does not blow over the birds. Sunlight is important, as it is the best disinfectant. Plenty of bright sunlight will help to keep the house dry, sweet, and clean. A combination of the points mentioned will go a long way in keeping hens strong, vigorous, and healthy. Light or sandy soil is best suited for a poultry run. Where the soil is heavy it should be well drained and will require to be spaded during the summer months. Spading the soil in any poultry yard will help to keep it sweet and clean. Adding air-slaked lime while spading makes this process still more effective.

The main object is to get eggs—the largest number at minimum cost. Not all hens are good layers. There is no best breed for egg production. The majority of breeds will, however, give a fair egg yield, if looked after properly. There is more in strain or in family than in breed, when it comes to heavy laying. Care-

ful selection of the best layers each year will enable one to build up a heavy laying strain in almost any breed.

For general-purpose breeds the Plymouth Rocks, Wyandottes, Rhode Island Reds, and Orpingtons are best. The following varieties are the most popular—Barred Plymouth Rocks, White Wyandottes, Single Comb Reds, and Buff Orpingtons. Others, while probably almost as good, have as yet not been able to gain the same popularity. A choice might be made on color only, or on breed characteristics. They all dress out good table birds and, as far as laying goes, a heavy laying strain may be developed in any of them.

For eggs alone the Single Comb White Leghorn seems to be the favorite. They are especially well adapted for backyard conditions, as they will thrive in restricted enclosures which are not suitable for some of the heavier breeds. The selection of a breed must depend a good deal on likes and dislikes and what the object is in keeping a flock. From a fancier's standpoint the choice might fall outside of these breeds entirely.



Buff Orpington Hen

In feeding a flock it is necessary to give four things: (a) hard grain, (b) green food, (c) animal or meat food, and (d) mineral food.

For hard-grain feed wheat and cracked corn are best. They should be mixed in equal quantities for winter, and two of wheat to one of corn for summer feeding. Barley and oats, although coarser grain, may be used to good advantage. Where the feed has to be bought there is but little advantage in using these, as they are in many cases higher in price than feed wheat and corn. Hard grain should be fed in straw where the hens have to scratch for it. Exercise is necessary to keep birds healthy. Feed at the rate of one good handful to two hens twice a day. Oats are best fed in the crushed or rolled form, with the hull still adhering to the kernel. Feed them as a dry mash in a hopper where the hens can eat all they want at any time, but make them scratch and hunt for the hard grain. Add about one per cent of charcoal to the crushed oats. This acts in the digestive

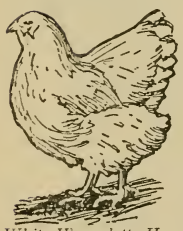


White Leghorn Rooster

system as an absorbent of bad gases. Feeding barley boiled will make it more palatable.

Green food can easily be secured in the summer in the form of lawn clippings, sod, sprouted oats, and so on. For winter use scalded lawn clippings mixed with a bran mash make a very good food. Feed this mash once a day. Cabbage, mangels, or turnips (uncooked) are also very good. Oats can be sprouted near the furnace or stove and fed as a green feed in winter. The yard or run can be seeded down with oats early in spring if sufficient space is available. Rape sown in the yard will also make a good green food.

Meat or animal food is best fed in the form of buttermilk or skim milk, but under ordinary circumstances these are not available. Table scraps may take the place of milk, and can be mixed in with the bran mash. Beef scrap or cut green bone are the two common forms of meat fed by backyard poultry-keepers. Some meat food is necessary to balance the feed and to make hens lay.



White Wyandotte Hen

The ordinary grains may contain all the lime and other mineral food required while the hens are not laying, but when they are in full laying they must have some extra mineral matter to make egg shells. Oyster shells furnish the lime required and grit furnishes the grinding material to enable the fowls to masticate their food. Variety is another important consideration. A little bit of everything will bring good results. Frequent changes from one food to another will have the desired effect also.

The object of feeding hens should be to use as much of the otherwise waste materials as possible and conserve all food fit for human consumption. Poultry-feeding should have for its object the increasing of the national food supply.

With proper care there will be but little trouble with disease, vermin, and so on. The general health of the flock can be maintained by doing the little things at the right time. Clean houses, clean food, clean water, clean drinking pans and food troughs are essential. Provide a good dust bath for the hens to dust in on sunny days. Dust the hens with louse powder if the dust bath is not sufficient to keep them free from lice. For red mites on the

roost use equal parts of coal-oil and creosote, or some other liquid disinfectant. Apply once a month, being careful to paint or spray well the lower side, ends, and cracks around the perches.

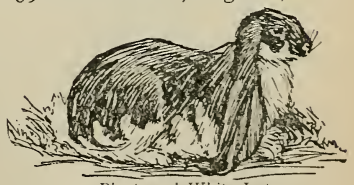
A fowl is a high-geared machine, and will perform an enormous task if properly looked after. Good treatment is responded to readily and the returns come quickly. From these facts we gather that the saying, "What is worth doing at all is worth doing well" will hold good in poultry-keeping. If fowl are not properly cared for and anything goes wrong, the injury done is more disastrous and harder to repair than with any other line of stock.

Little chickens grow faster than any other class of farm stock. A chick weighs about an ounce and a half when hatched and with proper care and good food will weigh twenty-seven ounces at eight weeks of age. This is increasing its original weight eighteen times in eight weeks. A three-and-a-half-pound Leghorn hen laying 200 eggs in a year will produce eggs weighing seven times her own weight. To get these results in either chicks or laying hens, good care and good food must be given and the other requirements mentioned above must be met.

The hints on poultry-keeping here given are intended to show what an interesting and profitable occupation it may prove to be. If the reader is interested let him start at once with a few good hens. If he makes a success with these, he may gradually improve his equipment and increase his stock.

Rabbits and Their Care

It is only with in the last sixty years that pet fanciers have cultivated the rabbit as a hobby. In 1859 at Gravesend, England, the first show was held. Since that time hundreds of exhibitions have developed many species and thousands of persons have found a delightful hobby in keeping these pets.



Black and White Lop

There are two main reasons for boys undertaking to keep and develop rabbits. One object is the pleasure they will get from seeing them grow and multiply and improve in quality, with the added delight of capturing prizes which indicate that they have

been able to grow a rabbit nearer to the recognized standards of excellence than those of their competitors. The other object of the hobby for most rabbit-keepers is the profit to be obtained for the sale of well-bred stock. With small capital boys may start and not only pay their way, but earn fair sums each year, through their industry and intelligent care of the rabbits. Not least important in these days of greater food production is the fact that many are cultivating certain varieties of rabbits to be used for food.



Flemish Giant

The careful, energetic boy, before investing the small amount of capital required, should secure the advice of some reliable fancier. He will be prepared to select healthy specimens with which a lad may start. It is very unwise to buy from advertisements that look attractive or from persons whose judgment is not dependable regarding this stock.

One must have a place to keep his pets. The rabbitry will need to be well built, airy, and bright, both inside and out. The owner will take far more enjoyment out of it if he can plan and build it every bit himself. Visit other rabbitries. Read descriptions of approved buildings in available books. Plan something you will be proud of. Next the "hutches" must be provided. The majority of rabbit fanciers seem to consider the single hutch the best, though in some cases three or four may be built together. They must be placed in the rabbitry in such a way that they may be easily cleaned and that plenty of air will get to them. The door must be of small mesh wire fastening securely and opening easily. For mother rabbits there must be the day room and retiring room. Provision must be made for the feed pans and hay racks. In the rabbitry there should be a grooming table, chairs, bins for food and sawdust, and a small chest or cupboard for brushes and record books. A most important feature will be for the successful keeper to have an accurate register of each rabbit and a strict account of his cash.



Belgian Hare

Proper feeding is a most important matter. A boy should study his animals and watch them closely to know whether they are getting proper food or not. Of course he will never fail to feed regularly and just enough natural food—not artificial—is required. Small white oats; clover, hay; crusts of rye bread; green food like dandelions, clover, lawn grass; vegetables, especially green cauliflower, leaves, and carrot tops; milk occasionally—are all recommended articles of diet. Occasional change of diet is desirable. An old saying, "Spare the hay and spoil the hare" holds.

There are certain fundamental rules which, if regarded, make for success:



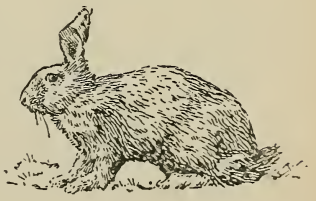
Dutch Marked Cavy

Rabbits should have plenty of air but be kept free from draughts. They should be kept in a temperature as nearly uniform as possible.

They should not be kept where they will be annoyed by dogs, cats, rats, or other animals. If they are in a quiet place removed from noises they will thrive better.

The rabbitry and hutches must be kept clean. They should be disinfected regularly and should be washed with lime once in a while.

Invalids should be isolated at once. If one rabbit gets a cold or any other ailment it should be removed at once, so as not to infect the others.



Silver Grey

Rough handling will deter progress very decidedly. Therefore it should be a rule of the rabbitry that no one is to be rude or rough with the pets.

The more care and regular attention given to the rabbits, the more certain will be the results. They have their peculiarities, the study of which is most interesting and contributes to success.

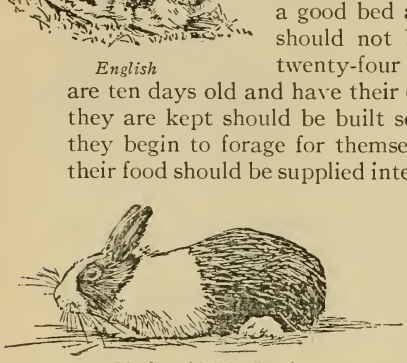
The careful study of the problem of breeding is most important. They should not be paired before they have matured, beginning at not earlier than eight or nine months and most authorities say when one year old. They should never be mated

when in a moulty condition or when there are any signs of ill-health. March is said to be the best time for breeding, while all agree that November, December, and January are months in which strong young are not usually produced. After three years the offspring degenerates and therefore older stock should not be allowed to breed.



English

During the thirty or thirty-one days when the doe is in kindle she should have special attention from her considerate keeper, with a good bed and good food. The little ones should not be touched at all for the first twenty-four hours and very little until they are ten days old and have their eyes open. The hutch in which they are kept should be built so they will not fall out. When they begin to forage for themselves, about the fourteenth day, their food should be supplied intelligently.



Black and White Dutch

The standards of excellence vary with different varieties and each well-known kind has certain "fine points" which the fancier will look for. The boy who wants to make his hobby distinctive will study his variety and develop the points that are recognized. These are some of the things an expert considers in judging a rabbit: color, shape, size, general condition, ears, eyes, legs, feet, ticking and markings, defects if any.

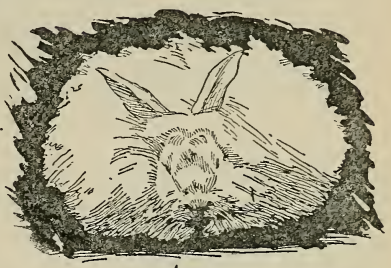
Space will not permit any detailed description of the well-known varieties of rabbits. We must be satisfied with the mention of a few with a fragmentary comment or two, and refer the reader to such a well-known book as "Practical Rabbit-keeping" by George A. Townsend.

The Dutch rabbit is undoubtedly one of the hardiest, strongest, and most popular varieties. It originated in Holland where it was bred for table purposes. It is found in five standard colors —black, blue, tortoise, steel, and dark gray, with occasionally blue-gray fawns and yellow.

The Lop-ears or Laps are among the oldest varieties. Fifty years ago twenty inches was considered a long ear for this breed,

distinguished largely by this point. Now they frequently are found with twenty-eight-inch ears. They are found in two classes—"Selfs" and "Broken Colors."

To the Belgians more attention is given by breeders than to any other variety. It resembles the wild hare and is marked by its bold clear eye and its color of rich golden tan.



Angora

The Silver rabbits come in three classes—grey, fawn, and brown. They are very handsome, bright, and lively. They need the care of specialists and should not be chosen until one has some experience with keeping and caring for rabbits.

The Angora is the most beautiful and dainty of all varieties. What a joy to an average boy it would be to be able to produce these and to keep them always as pretty as the picture shows them to be.



Himalayan

The English rabbit, one of the most recently developed species, is noted for its striking and beautiful markings.

The Himalayan variety gets its name from the fact that it is fawn color, though black and several other varieties of the species have been shown.

Illustrations of some of these leading varieties are shown and it will be most interesting to rabbit-lovers to follow up the suggestions given here, supplementing them with fuller information obtainable in manuals given over exclusively to the rabbit and his care.



CHAPTER XVI

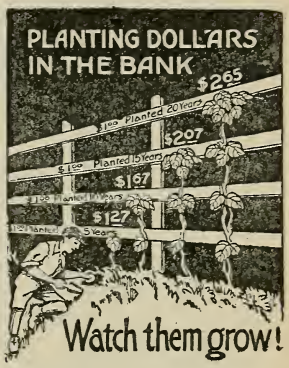
THRIFT OF TIME AND MONEY

I know a boy about twelve years old who has a small weekly allowance, and who also earns a little now and then. Some way he always keeps a bit ahead of the game. He has a good number of War Savings Stamps and when he wants to buy a top or an ice-cream soda or go to the movies, *he* decides whether he wants to spend that money or not. Other boys run to find father or mother and, according to that particular parent's state of finance or temper, those boys go to the movies or do not go, but this boy goes to his own pocketbook. He uses restraint, of course, or there would be nothing in the pocketbook. However, he has as much or more of such little pleasures as the other boys in his gang, and he is far more independent than they. He is also learning the pleasure of giving and the gifts, too, are his own. He *always has money*, but he doesn't always spend it. That's why he has it when he needs it badly. And having money when you need it badly means self-respect and power. So when you see its relation to everyday life among boys, thrift is not so dull a subject as it appears.

Thrift is not merely the saving of money, it is careful use of all our resources. Take the matter of play material: how often a baseball team will buy two balls, a mask, a bat or two, and in three weeks half the things cannot be found. Probably no one has stolen any of them; but when the team wants to practice, its wealth in baseball material has largely disappeared.

Or take thrift in clothing: every boy who has been on a two-weeks' camping trip with as many as twenty-five boys in the party, will probably remember one boy who had nothing to put

in his "old kit bag" when it came time to go home. His shoes, which were soaked through on the day he got caught in the rain, he had not attended to. They looked so badly that he felt free to use them when catching frogs at a muck-hole, and with this second wetting they had become so stiff that the leather had cracked. His sweater had been lost on an outing, for days he had not been the possessor of a handkerchief, and the stockings he wore home were borrowed. As for a hat, he never did learn what became of the hat he had been wearing when he arrived. Every large camping party has such a boy; to the rest he is a huge joke, but his unthrifty habits in clothing do not help him to earn a camp emblem, nor do they predict a steady, successful, business career unless he learns to use resources better as the years go on.



The way in which some boys will take broken-down baby-coaches or velocipedes and out of the remains build carts, coasters, or marvelous-looking automobiles is a joy to see. These boys are real illustrations of thrift. In the Great War millions of dollars' worth of iron and steel and leather were saved by collecting from the battlefields disabled guns, parts of shells, old shoes, harness, and the like.

But probably the use of money is, after all, one of the chief ways in which the PIONEER will learn to be thrifty with all valuable things. You see, money is some one's stored-up effort, anyway. Every dollar or quarter or dime we ever spend was earned by some person's hard work, so care with money, when we stop to think about it, is in itself a right and necessary habit. Here are four aspects of thrift the PIONEER should learn and practice: (1) Productive Earning; (2) Wise Spending; (3) Careful Saving; (4) Helpful Giving.

How Can a Boy Earn Money?

Here are thirty-nine ways to earn money. They were worked out for both boys and girls during the great Earn and Give Cam-

paign in the United War Fund Drive. Great care was exercised to make sure that these jobs did not interfere with the child labor laws. Boys of the PIONEER age should *always* be careful to do only the kinds of work allowed by law, not only for their own good but for the reason that those laws have been built up at great effort for the protection of children, especially those who do not have a very easy or happy time in life. Generous-hearted boys, when they understand this, are always willing to uphold the laws protecting children, even if they are obliged to pick carefully the kinds of work they can legitimately do to earn their money.

This is, certainly, a reassuring list and indicates how many proper ways there really are for a boy to earn money:

Digging gardens
Planting bulbs
Cleaning silver
Washing windows
Scrubbing floors
Waxing floors
Varnishing chairs
Running errands
Selling magazines
Picking fruit
Husking corn
Gathering nuts
Picking cotton
Cleaning yards
Cleaning sidewalks
Caring for furnaces
Mowing and raking lawns
Sifting and dumping ashes
Making maple syrup
Decorating show windows
Tutoring backward students
Beating carpets and rugs
Sawing and cutting wood
Shoveling snow from walks
Helping to harvest ice
Working about a dairy
Cleaning cellars, attics, and barns
Painting houses, barns, and fences
Painting and putting away screens
Raising guinea pigs and white mice
Raising chickens, pigs, rabbits and squabs
Selling butter, eggs, vegetables, and fruit
Trapping fur-bearing animals in season
Washing automobiles and carriages
Waiting on table as "extras" in boarding houses
Making stocking stretchers for ladies who are knitting
Selling pecans, walnuts, etc., especially during the Christmas season
Selling appropriate religious books and publications for Christmas gifts
Making needed household articles, such as coatracks, chairs, andirons, umbrella racks, etc., that sell at reasonable prices.

This other list seems to have some good suggestions for boys in the country as well as the city:

Husking corn
Doing janitor work at the high school
Doing "chores" for a neighbor who is short of help
Turning over part of the proceeds of the sale of his pig or steer
Working as a "gang" on Saturdays
Selling refreshments at football games
Contracting for cleaning up alleys and back lots
Selling coffee and sandwiches at farm sales
Picking fruit
Gathering nuts
Making syrup
Working about a dairy
Painting houses, barns, and fences
Raising chickens, pigs, and squabs
Selling butter, eggs, vegetables, and fruit
Trapping fur-bearing animals in season
Selling pecans, walnuts, etc., especially during the Christmas season.

Careful Saving



Saving a part of what a boy earns does two very important things. First, it gives him an increase if it is put in the savings bank or into insurance or War Savings Stamps, and helps to provide for later education or a start in business. With money in the bank a boy is always in a position to help himself or others in emergencies. Second, by so saving a boy adds to the money available for great undertakings in the business world or in national crises.

There was not much saving when the race was in its nomad days. When food was needed, an animal was shot or wild fruit or nuts were plucked. Did you ever stop to think how far away we are from that stage? Every building in our cities, every farm house or

barn, every railroad train, every ship on the ocean, is there because *somebody saved money*, or was thrifty with his labor at a time when he might have spent it for immediate pleasure. All the great businesses of the United States—the great railroads, banks, and loan companies that lend money to farmers and others, the great universities and schools, the museums, the flourishing cities and towns, are in existence because our forefathers *saved* when they might have spent.

Spending

If you can buy the same article or one just as useful for fifteen cents instead of paying a quarter, it is quite as good as earning an extra dime. Many boys are good earners and good savers but poor spenders; they do not secure the worth of their money. What is true of money is also true of leisure; even a boy's playtime is too valuable to be squandered. "What kind of a game did you have?" I asked my own boy the other evening. "Not much of a game, Father," he replied. "We spent most of the afternoon squabbling."

Frequently one thoughtless boy is responsible for such a poor game. He is a spendthrift not only of his own but of other folks' precious time. The same is true of being *on time* at school, work, games, group meetings, and the like. Most of us sin badly enough in this matter of keeping other people waiting, so here is another practical, fine quality for a boy to cultivate—thriftiness in spending time, his own or somebody else's.

Watch other boys or older persons who spend time and money wisely for suggestions as to how to get the most out of life and put the most in by good habits of spending.

Giving

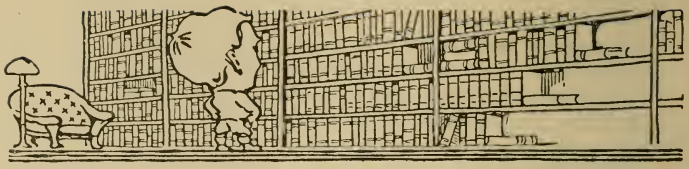
No one can ever truthfully say that American boys cannot give. In one of the early war campaigns of the Y. M. C. A., more than 100,000 boys pledged themselves to earn and give $10 each to help the soldiers, and a very large proportion of the boys made good on their pledges. In the great United War Fund drive in 1918, more than $2,000,000 was pledged by boys and girls, a prodigious sum, and none of it was allowed to be solicited. It must be earned. This vast amount shows how generously boys

and girls will work and give if their hearts are touched by need. And there are just as grievous needs among the children of less fortunate lands always and, indeed, in our own lands—needs that strong, happy American boys should, and doubtless will, help to relieve. There are few joys greater than systematic generous giving to great causes—the church, the relief of poverty, extension of Sunday school work, the great missionary undertakings, hospitals, and all other work that makes the spirit of Christ known and active throughout the world.

So thrift is, after all, a concern of daily importance to the PIONEER and if he lives up to this standard of splendid Christian boyhood, he will find his thrifty habits resulting in such practical matters as these:

1. He will use conscientiously and conserve carefully what is given him by parents or others—clothing, food, shelter, and money allowance.
2. He will earn money and form the habit of saving a portion of it.
3. He will be careful to use well, and help keep in good condition, goods and property used in common with others, such as parks, playgrounds, athletic material, library books, school equipment, tools, and machinery.
4. He will give, according to his own income, to educational, religious, and social betterment enterprises of various kinds.

Henry Ford says: "Thrift is one of the cornerstones on which manhood is constructed," and when it comes to constructing things the famous auto manufacturer speaks with authority.



CHAPTER XVII

WHAT SHALL I READ?

The story is told that Henry Clay's mother took in washing in order to secure a few extra pennies with which to buy books for Henry. She believed books were a good thing for a boy, especially the right kind. Now books were not nearly so plentiful in Henry's day as they are now, but they are just as important to the boys of this generation as they were to Henry Clay or Abraham Lincoln. All the best things that the best men of all ages have thought about, every conceivable subject can all be found in books. It is perfectly surprising how much of what we know about people and places and things come out of the books we read. No real boy can possibly get along without books and he should not do so. Every boy in America should have a library of his own and the size of it is not the important thing, but the quality. Some one has said: "Let every boy, if possible, gather some good books under his roof and obtain access to some sort of a library; almost any other luxury should be sacrificed for this." Books are the windows through which a boy's imagination looks out—a house without books is like a room without windows.

Yes, and have a shelf for your own books too. If there isn't room in the family bookcase, make a shelf of your own, so you can have your "bound friends" close to you. Be sure there are no "fellows" on the shelf for whom you will have to apologize, for a boy hates to have to apologize for his friends.

A wise man once said to a boy: "Son, tell me what you read and I'll tell you what you are going to be." He did not mean that he would tell him whether he was going to be a doctor or an

aviator or a circus performer or a statesman so much as he meant what kind of a doctor or statesman he was going to be.



If a boy has just so much time to read and there is a very great plenty of real, red-blooded, masculine books that are worth while—books in every possible realm from adventure to applied science—easily available, then a boy is surely foolish to waste his time reading poor stuff. Isn't he? You cannot tell a good book just by looking at it, and of course you cannot read them all to find out if they are good. Then what can you do? Can you just depend on your friends to recommend? No, that is worse still; but there are several ways to know good books. One is by noting the author. Certain authors are considered first-class, others as fair, and all too many as poor. Read books by well-known first-class men who write for boys. If you are doubtful, ask some one who knows. Another way is by noting the publisher. First-class publishers would never think of endangering their reputation by publishing trash. All publishers of boys' books are not first-class, but the easiest and most satisfactory way of all is to depend on a trained librarian or lists of books prepared by such librarians. It is their business to know when books are worth while.

A great many of the popular boys' series are not worth while. The facts and information that they give are not true; the language is often vulgar and cheap; the characters are overdone and created to make excitement instead of expressing real people as you find them in the world. Read—certainly, first as many good books of as many kinds as you possibly can. Don't forget along with your adventure a few lives of men who have done or are now doing worth-while things. If you like history, read real historical stories. Read about invention and travel along with baseball and fishing, and in the lists that follow you will find an excellent guide, either to buy from or to read from or both. Show me your library and I'll tell you a lot of interesting things about yourself and your future.

Best Books for Boys

HEROES OF ADVENTURE

Log of a Cowboy, *Andy Adams*
Little Men, *Louisa M. Alcott*
The Cruise of the "Ghost," *W. L. Alden*
Hunters of the Hills, *J. A. Altsheler*
The Last of the Chiefs, *J. A. Altsheler*
Greyfriar's Bobby, *Eleanor Atkinson*
Left Guard Gilbert, *R. H. Barbour*
The Boy Emigrants, *Noah Brooks*
Master of Strong Hearts, *E. S. Brooks*
Quest of the Golden Valley, *Belmore Brown*
Cruise of the "Cachalot," *F. T. Bullen*
The Lost Prince, *F. Hodgson Burnett*
Track's End, *H. Carruth*
Camping with Henry, *F. H. Cheley*
Two Years before the Mast, *R. H. Dana*
Robinson Crusoe, *D. DeFoe*
Hans Brinker, *M. M. Dodge*
Cattle Ranch to College, *Russell Doubleday*
Struggling Upward, *Sherwood Dowling*
Adventures of Sherlock Holmes, *A. C. Doyle*
Adventures of Billy Topsail, *Norman Duncan*
Billy Topsail, M. D., *Norman Duncan*
T. Haviland Hicks, Senior, *J. R. Elderdice*
Ross Grant, Tenderfoot, *Hamlin Garland*
Boy Life on the Prairie, *Hamlin Garland*
Warpath and Hunting Trail, *Elmer Gregor*
Jack, the Young Ranchman, *G. B. Grinnell*
Phillip Kent of the Lower School, *Truxton Hare*
Captain Fair and Square, *W. D. Heyliger*
The Young Alaskans, *Emerson Hough*
The Ranch of the Oxhide, *Henry Inman*
Aztec Treasure House, *Thos. A. Janvier*
Captains Courageous, *Rudyard Kipling*
The Lure of the Black Hills, *D. Lange*
Redney McGaw, *Arthur E. McFarlane*
Jim Davis, *John Masefield*

Martin Hyde, *John Masefield*
Dorymates, *Kirk Monroe*
Safety First, *W. R. Nichols*
Wrecking Master, *R. D. Paine*
The Voyage of the "Hoppergrass," *Edmund Lester Pearson*
The Fullback, *Lawrence Perry*
The Human Boy and the War, *Eden Philpotts*
Stolen Treasure, *Howard Pyle*
Iceboat Number One, *Leslie W. Quirk*
The Boy Settler, *E. L. Sabin*
The Gold Seekers of '49, *E. L. Sabin*
Apauk, Caller of Buffalo, *J. W. Schultz*
With the Indians in the Rockies, *J. W. Schultz*
Kidnapped, *R. L. Stevenson*
Buccaneers and Pirates of our Coast, *F. R. Stockton*
Making Good in the Village, *W. O. Stoddard*
Gold Seeking on the Dalton Trail, *A. R. Thompson*
To the Land of the Caribou, *Paul G. Tomlinson*
The Strange Gray Canoe, *Paul G. Tomlinson*
Gibby of Clamshell Alley, *J. S. Van Dresser*
The Cruise of the "Cormorant," *A. H. Verrill*
An American Crusoe, *A. H. Verrill*
Marooned in the Forest, *A. H. Verrill*
The Gaunt Grey Wolf, *Dillon Wallace*
Bobby of the Labrador, *Dillon Wallace*
Fur Trail Adventures, *Dillon Wallace*
Lure of the Labrador Wild, *Dillon Wallace*
Ungava Bob, *Dillon Wallace*
Swiss Family Robinson, *J. D. Wyss*

Heroes of Chivalry

Story of Roland, *J. Baldwin*
John Halifax, Gentleman, *D. M. Craik*
Sir Marrok, *Allen French*
The Court of King Arthur, *W. H. Frost*
A Knight of the White Cross, *G. A. Henty*
Heroic Legends, *A. G. Herbertson*
Knights of the Golden Spur, *Rupert S. Holland*
Historic Heroes of Chivalry, *Rupert S. Holland*

The Boy's King Arthur, *Sidney Lanier*
Stories from the Faerie Queene, *M. McLeod*
Dick in the Desert, *J. Otis*
Men of Iron, *Howard Pyle*
Otto of the Silver Hand, *Howard Pyle*
The Story of King Arthur and His Knights, *Howard Pyle*
The Story of Sir Lancelot, *Howard Pyle*
The Story of the Champions of the Round Table, *Howard Pyle*
The Story of the Grail and the Passing of Arthur, *Howard Pyle*
The Merry Adventures of Robin Hood, *Howard Pyle*
Ivanhoe, *Sir Walter Scott*
Stories from Old French Romance, *E. M. Wilmot-Buxton*
Stories of Persian Heroes, *E. M. Wilmot-Buxton*
A Book of Golden Deeds, *Charlotte M. Yonge*
Boy's Ride, *Gulielma Zollinger*
Rout of the Foreigner, *Gulielma Zollinger*

Heroes of Daring

The Story of Siegfried, *James Baldwin*
A Story of the Golden Age, *James Baldwin*
The Modern Vikings, *Hjalmar Boyesen*
A Boy of the First Empire, *Elbridge S. Brooks*
The Story of Marco Polo, *Noah Brooks*
Beach Patrol, *W. Drysdale*
Lance of Kanana, *H. W. French*
The Boy's Froissart, *J. Froissart*
Boy's Book of Pirates, *Henry Gilbert*
Adrift on an Ice-pan, *W. T. Grenfell*
By Pike and Dyke, *G. A. Henty*
For the Temple, *G. A. Henty*
Fighting a Fire, *Chas. T. Hill*
Wulnoth the Wanderer, *H. E. Inman*
Adrift in the Arctic Ice-pack, *Elisha Kent Kane*
Olaf the Glorious, *Robert Leighton*
Careers of Danger and Daring, *Cleveland Moffett*
Life Savers, *James Otis*
The Lighthouse Keepers, *James Otis*
Stories from the Chronicles of the Cid, *Mary W. Plumner*
Scottish Chiefs, *Jane Porter*

Otto of the Silver Hand, *Howard Pyle*
Jack Ballister's Fortunes, *Howard Pyle*
The Spartan, *C. D. O. Snedeker*
In the Days of Alfred the Great, *E. M. Tappan*
In the Days of William the Conqueror, *R. M. Tappan*
Gold Seeking on the Dalton Trail, *A. R. Thompson*
The Voyages of Captain Scott, *Retold by Chas. Turley*
The Lure of the Labrador Wild, *D. Wallace*
Ben Hur: A Tale of the Christ, *Lew Wallace*
Boys' Napoleon, *H. F. B. Wheeler*

HEROES OF HUMOR

Story of a Bad Boy, *Thos. B. Aldrich*
The Monkey That Would not Kill, *Henry Drummond*
T. Haviland Hicks, Freshman, *J. R. Elderdice*
At Good Old Siwash, *George Fitch*
Nights with Uncle Remus, *Joel Chandler Harris*
Uncle Remus: His Songs and His Sayings, *Joel Chandler Harris*
Phaeton Rogers, *R. Johnson*
The Varmint, *Owen Johnson*
Lucky and His Gang, *Grace S. Mason*
Toby Tyler; or Ten Weeks with a Circus, *James Otis*
Mr. Stubbs' Brother, *James Otis*
A Jolly Fellowship, *Frank R. Stockton*
Penrod, *Booth Tarkington*
The Adventures of Huckleberry Finn, *Mark Twain*
The Innocents Abroad, *Mark Twain*
The Prince and the Pauper, *Mark Twain*
The Adventures of Tom Sawyer, *Mark Twain*
A Connecticut Yankee in King Arthur's Court, *Mark Twain*
Being a Boy, *Chas. D. Warner*

HEROES OF THE NATION

I. Biography and History

The Story of Our Navy for Young Americans, *Willis J. Abbot*
The Hero of Erie (Commodore Perry), *James Barnes*
Midshipman Farragut, *James Barnes*
Yankee Ships and Yankee Sailors, *James Barnes*

Boots and Saddles, *Elizabeth B. Custer*
The Boy General, *Elizabeth B. Custer*
The True Story of Benjamin Franklin, *Elbridge S. Brooks*
The True Story of George Washington, *Elbridge S. Brooks*
Brave Deeds of Revolutionary Soldiers, *R. B. Duncan*
American Leaders and Heroes, *Wilbur F. Gordy*
Life of Grant for Boys and Girls, *Warren Lee Goss*
On the Trail of Grant and Lee, *F. T. Hill*
On the Trail of Washington, *F. T. Hill*
Abraham Lincoln: The Boy and the Man, *Jas. Morgan*
The Boys' Life of Ulysses S. Grant, *Helen Nicolay*
The Boys' Life of Lincoln, *Helen Nicolay*
Young Heroes of the American Navy, *Thos. A. Parker*
Hero Tales from American History, *Theodore Roosevelt* and *Henry Lodge*
Paul Jones, *Molly Elliot Seawell*
The Story of Our Navy, *William O. Stevens*
Story of Young George Washington, *Wayne Whipple*

II. Historical Stories

The Guns of Bull Run, *J. A. Altsheler*
The Rock of Chickamauga, *J. A. Altsheler*
Shades of the Wilderness, *J. A. Altsheler*
The Tree of Appomattox, *J. A. Altsheler*
Keepers of the Trail, *J. A. Altsheler*
Hunters of the Hills, *J. A. Altsheler*
Roger Paulding, Apprentice Seaman, *Capt. Edward L. Beach, U. S. N.*
A Midshipman in the Pacific, *C. T. Brady*
A Son of the Revolution, *E. T. Brooks*
Banner of the White Horse, *C. M. Case*
The Pilot, *James Fenimore Cooper*
The Spy, *James Fenimore Cooper*
Camp Fire and Trail, *R. Clyde Ford*
Man Without a Country, *E. E. Hale*
Cadet Days, *Gen. Charles King*
A West Point Lieutenant, *Capt. Paul B. Malone, U. S. A.*
Tom Strong, Washington's Scout, *A. B. Mason*

Tom Strong, Third, *A. B. Mason*
With Perry on Lake Erie, *James Otis*
Great Locomotive Chase, *Wm. Pittenger*
On the Plains with Custer, *Edwin L. Sabin*
With Sam Houston in Texas, *Edwin L. Sabin*
Brave Deeds of Union Soldiers, *S. Scoville*
Little Jarvis, *Molly Elliot Seawell*
The Boy Captive of Old Deerfield, *M. P. W. Smith*
Black Arrow, *R. L. Stevenson*
Three Years behind the Guns, *L. G. Tiddale*
Prisoners of War, *E. T. Tomlinson*
Tecumseh's Young Braves, *E. T. Tomlinson*
The Boy Sailors of 1812, *E. T. Tomlinson*
The Young Sharpshooter, *E. T. Tomlinson*
Marching against the Iroquois, *E. T. Tomlinson*
With Flintlock and Fire, *E. T. Tomlinson*
Three Colonial Boys, *E. T. Tomlinson*
Trail of the Mohawk Chief, *E. T. Tomlinson*
Scouting with Kit Carson, *E. T. Tomlinson*
Scouting for Washington, *J. P. True*

III. Books on the Great War

At the Edge of the War Zone, *Mildred Aldrich*
Hilltop on the Marne, *Mildred Aldrich*
Under the Red Cross Flag, *Mabel Boardman*
The Cause; Poems of the War, *Lawrence Binyon*
Collected Poems, *Rupert Brooke*
Ambulance No. 10, *Leslie Buswell*
Christine, *Alice Cholmondeley*
Poems of the Great War, *J. W. Cunliff*
Carry On! *Coningsby Dawson*
Plattsburg Manual, *O. O. Ellis* and *E. B. Gary*
Over the Top, *A. G. Empey*
You Are the Hope of the World, *Hermann Hagedorn*
Kitchener's Mob, *J. N. Hall*
A Student in Arms, *Donald Hankey*
First Hundred Thousand, *Ian (Beith) Hay*
My Home in the Field of Honor, *F. W. Huard*

My Home in the Field of Mercy, *F. W. Huard*
Spires of Oxford and Other Poems, *W. M. Letts*
Flying for France, *J. R. McConnell*
Harvest Moon, *J. P. Peabody*
Kings, Queens, and Pawns, *Mrs. Mary R. Rinehart*
My Fourteen Months at the Front, *W. J. Robinson*
Poems, *Alan Seeger*
Rhymes of a Red Cross Man, *R. W. Service*
German Versus Civilization, *William Roscoe Thayer*
Poems, *Emile Verhaeren*
Fifes and Drums, *The Vigilantes*
Why We Are at War, *Woodrow Wilson*

HEROES OF THE OUT-OF-DOORS

I. Biography—Scouts and Pioneers

Kit Carson, *J. S. C. Abbott*
Daniel Boone, *J. S. C. Abbott*
David Crockett, *J. S. C. Abbott*
David Crockett, Scout, *Chas. Allen Fletcher*
Adventures of Buffalo Bill, *Col. W. F. Cody*
Daniel Boone, Backwoodsman, *C. H. Forbes-Lindsay*
Famous Indian Chiefs I Have Known, *Major-General O. O. Howard, U. S. A.*
The Last of the Plainsmen, *Zane Grey*
Captain John Smith, *Tudor Jenks*
Buffalo Bill and the Overland Trail, *Edwin L. Sabin*
With Carson and Fremont, *Edwin L. Sabin*
Life of David Crockett, *W. C. Sprague*
With Fremont the Pathfinder, *J. H. Whitson*

II. Stories of Outdoor Life

The Horseman of the Plains, *J. A. Altsheler*
The Young Trailers, *J. A. Altsheler*
The Boy Scouts of Woodcraft Camp, *Thornton W. Burgess*
The Boy Scouts of Bob's Hill, *Chas. Pierce Burton*
Camp Bob's Hill, *C. P. Burton*
The Boy Scout Trailblazers, *F. H. Cheley*

Told by the Camp Fire, *F. H. Cheley*
Leatherstocking Tales, *James Fenimore Cooper*
Be Prepared, *A. W. Dimock*
The Boy Scouts of Berkshire, *Walter P. Eaton*
Along the Mohawk Trail, *Percy K. Fitzhugh*
Red Arrow, *Elmer E. Gregor*
Camping in the Winter Woods, *E. E. Gregor*
The Wolf Hunters, *G. B. Grinnell*
Trails of the Pathfinders, *G. B. Grinnell*
The Boys of Crawford's Basin, *S. F. Hamp*
Shaggycoat, *C. Hawkes*
The Boy Scouts of Birch-Bark Island, *Rupert S. Holland*
A Scout of Today, *Isabel Hornibrook*
In the Great Wild North, *D. Lange*
The Call of the Wild, *Jack London*
The Boy Scout's Year Book, *W. P. McGuire* and *F. K. Mathiews*
Canoemates, *Kirk Monroe*
Campmates, *Kirk Monroe*
Boy Scouts of the Black Eagle Patrol, *L. W. Quirk*
Pluck on the Long Trail; or Boy Scouts in the Rockies, *Edwin L. Sabin*
Trapper Jim, *Edwyn Sandys*
With the Indians in the Rockies, *Jas. W. Schultz*
The Biography of a Grizzly, *Ernest T. Seton*
The Trail of the Sandhill Stag, *E. T. Seton*
Wild Animals I Have Known, *E. T. Seton*
Wild Animals at Home, *E. T. Seton*
Rolf in the Woods, *E. T. Seton*
Animal Heroes, *E. T. Seton*
The Scout Master of Troop 5, *Ida T. Thurston*
Scouting with Daniel Boone, *E. T. Tomlinson*

Heroes of Sports

The Half-back, *Ralph Henry Barbour*
Change Signals, *R. H. Barbour*
For the Honor of the School, *R. H. Barbour*
The Brother of a Hero, *R. H. Barbour*
Danforth Plays the Game, *R. H. Barbour*

Left Tackle Thayer, *R. H. Barbour*
The Crimson Sweater, *R. H. Barbour*
Against Heavy Odds, *R. H. Barbour*
Danny Fists, *Walter Camp*
Danny, the Freshman, *Walter Camp*
Following the Ball, *A. T. Dudley*
At the Home Plate, *A. T. Dudley*
The School Team on the Diamond, *John Prescott Earl*
Making the Freshman Team, *T. Truxton Hare*
Bartley, Freshman Pitcher, *William Heyliger*
Against Odds, *William Heyliger*
Tom Brown's School Days, *Thomas Hughes*
Pitching in a Pinch, *Christy Mathewson*
The School Days of Elliott Gray, Jr., *Colton Maynard*
College Years, *Ralph D. Paine*
Head Coach, *Ralph D. Paine*
Harding of St. Timothy, *A. S. Pier*
The Jester of St. Timothy's, *A. S. Pier*
The Boys of St. Timothy, *A. S. Pier*
Freshman Dorn, Pitcher, *Leslie W. Quirk*
Baby Elton, Quarterback, *Leslie W. Quirk*
The Fourth Down, *Leslie W. Quirk*
The Pennant, *E. T. Tomlinson*
Fair Play, *H. Williams*
Batter-up, *Hawley Williams*

HEROES OF SUCCESS

I. Biography

Historic American, *E. S. Brooks*
True Story of Abraham Lincoln, *E. S. Brooks*
The Boyhood of Lincoln, *Hezekiah Butterworth*
Autobiography, *Benjamin Franklin*
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CHAPTER XVIII

FIRST AID TO THE INJURED

In a brief chapter on First Aid obviously one can give only the essential points. Just why it is best to do a thing this or that way cannot be fully presented. There are a few general directions, however, that should be borne in mind in any case of accident:

A boy, to be helpful in case of accident or sudden illness, should be cool, deliberate, reasonable, use common sense, and decide definitely what to do and do it. If the injury is serious, call a reputable doctor and at the same time administer such First Aid as is needed. Insist that the crowd be kept back and make the patient as comfortable as possible by loosening all tight clothing. Place patient on side if vomiting. If the patient's face is pale and he is cold, place him flat on his back and warm him by rubbing, covering with coat, etc. If there is bleeding from a hidden injury, locate it at once and treat it properly. In order to do this satisfactorily the clothing may need to be removed; if the injury is painful or bleeding profusely, the greatest gentleness is demanded and clothing had much better be cut away with sharp knife or scissors. When you can add to the comfort of the patient without danger, always do it. If not severely injured let him sit up if he so desires, and give him fresh water if he calls for it—cold water, if possible; it is always more refreshing. If badly needed, it may be well to give a mild stimulant. Whisky or brandy are not at all necessary; use, instead, aromatic spirits of ammonia, unless it is a head injury. Never give an unconscious person a stimulant. If there are broken bones and the

patient must move, the broken bone should always be secured by applying some temporary splint. Exercise great care in handling the injured.

Conditions of Depression

There are a number of conditions which may be classified under this head, such as shock, heat exhaustion, severe bleeding, and fainting. As a group, these have certain definite earmarks. The patient is usually conscious, but consciousness is dulled. In fainting, consciousness is absent for a few minutes, the face is pale, and the breathing is rapid and shallow, the pulse is rapid and weak, the skin cool and covered with a clammy sweat. All the vital functions seem weakened and depressed. The heart is working over-time to keep going, consequently the patient is cold and inclined to be dull.

What can we do to aid such a patient? First, send for a doctor if possible. Next make the patient comfortable. Place on the back with the head low. Since the patient in this condition is cold, make every effort to warm him. Rouse him by stimulating the heart and lungs. Warm him by wrapping him in a blanket. If in cold weather, warm the blanket. If no blankets can be had, use clothing of any sort, putting it under as well as over him. If he is conscious enough to swallow, hot drinks will help tremendously to warm him. Use aromatic spirits of ammonia to stimulate the heart and induce deeper breathing. The dose is one-half teaspoonful in one-half glass of water. This can be repeated in twenty minutes. If you cannot get aromatic spirits of ammonia, use hot black coffee, preferably with sugar—it will do very well. Even hot sugar and water is helpful. In cases of depression due to severe hemorrhage, the bleeding must be stopped before the stimulant is given. The use of compresses and tourniquets, also where and how to apply them in order to stop bleeding, will be discussed under that heading (see page 306).

When there has been a severe injury to the patient and he is in this depressed condition, we call it shock; whatever other injury there is, except severe hemorrhage, shock should be treated first. If a patient suddenly becomes pale, falls, and is completely unconscious, he has probably fainted. By lowering the head, loosening the clothing, and sprinkling the face with

water the patient will respond quickly. Heat exhaustion is shock from excessive heat and signs of depression are apparent. Treatment should be the same as outlined above.

Head Injuries

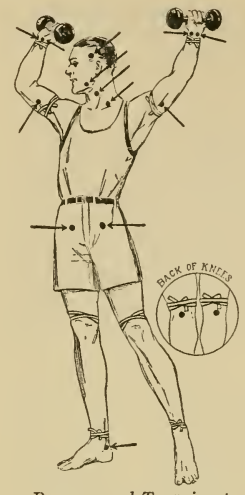
Conditions known as head injuries can be placed in one group because the symptoms are the same and the treatment follows the same lines. Under this classification come those conditions where the patient's consciousness is dulled or absent for hours, the skin is flushed, the breathing deep, noisy, and somewhat slow, the pulse is full and slow, and the skin is hot, either wet or dry. Concussion of the brain, fracture of the skull, apoplexy, epilepsy, drunkenness, sunstroke—all come in this general class.

In this group of injuries the patient is unconscious, yet the heart seems to be working all right; often the breathing is not labored yet there seems to be over-stimulation, so there is no need of giving stimulants. As in all cases of injury, the patient should be made comfortable and in this group the head should be raised. If the temperature seems high, place a cold, wet cloth on the head. Remember to call a doctor unless consciousness returns at once and you know the concussion was slight.

Wounds and Infection

A wound is an injury in which the skin is broken and there is usually more or less damage to the tissues beneath it. There are (1) cut or incised wounds, such as are caused by sharp knives or glass; (2) torn or lacerated wounds, where the tissues are torn rather than cut; and (3) punctured wounds, usually quite deep, caused by sharp-pointed instruments.

Before we take up wounds in detail we must briefly discuss infection. Bacteria, especially those varieties which produce pus, exist everywhere. The skin is our protection against all such bacteria. When the skin is broken, as happens in any wound or compound fracture, the bacteria find their chance to enter the body. From the use as a dressing of a handkerchief with germs on it, or from the dust of the air, or from the contact of dirty hands, these bacteria often enter the wound and if left undisturbed infection takes place and pus is formed. A badly



Pressure and Tourniquet Points

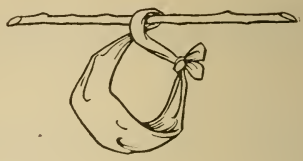


Fig. 1

infected wound may quickly result in the loss of life; consequently the treatment of all wounds is very important.

This treatment can be considered under two heads: (1) Treatment of wounds *without* severe hemorrhage and (2) treatment of wounds *with* severe hemorrhage. Remember to send for a doctor at once if the wound is severe. Cut clothing away from wound and be sure that nothing sticks to it. Do not touch the wound with the hands or let the patient touch it. There is no hurry unless the air is dusty; if so, cover at once as there is danger of infection. If you have a surgically clean, sterile bandage, free from germs, apply it to the wound and bandage. No attempt should be made to wash or disinfect the wound, unless it be to pour iodine into it from a first aid kit.

Be sure to treat patient for shock if there is any. If faint, have him lie down with head low. The first thing to do in case of wounds with severe hemorrhage is to stop the bleeding. In order to do this you must know from which kind of vessels the blood comes—from the arteries, the veins, or the more slowly-bleeding capillaries. Arterial blood is bright red and comes from the wound in spurts or jets. Blood is lost very rapidly. Vein bleeding is recognized by a steady flow of dark colored blood. Capillary bleeding is slow oozing from the wound, with the blood brick red in color. Arterial bleeding is stopped by pressure of the finger on certain pressure points or by tourniquet on tourniquet points. For illustration see Fig. 1. First try pressure with the fingers; meanwhile have someone prepare a tourniquet, the simplest of which can be made by tying a handkerchief loosely

about the limb, tightening it by twisting a small stick inserted through it. Tighten until bleeding stops and then keep stick there by tying one end to the injured part. A long stocking also makes a good tourniquet. *Warning:* Do not forget that you have stopped the circulation in the part below the tourniquet. That part will die if it does not get a fresh supply of blood once in a while; consequently if the tourniquet must be kept tight for a long time, pending the doctor's arrival, loosen once an hour, then tighten again if bleeding starts. Venous blood can usually be stopped by pressure of a sterile compress directly over the wound. In severe cases a tourniquet may be necessary below the wound. Often with pressure the venous bleeding will stop. If the blood vessels of the neck are cut, blood will be lost rapidly and the patient will die. In this case disregard infection and press your hand tightly against bleeding point. Capillary bleeding may be stopped by compress over wound. When such bleeding is stopped, if wound is still uncovered, cover with sterile compress. In all such cases keep patient quiet with head low. No stimulant ought to be given unless it is a question of life and death.

First Aid Materials

The main uses of the bandage are (1) to keep dressings in place; (2) to secure splints; (3) to stop bleeding from pressure; (4) for use as sling or to keep in normal position parts of the body which have been dislocated by injury. There are several kinds of bandages: The triangular bandage; the roller bandage; and special bandages.

The Triangular Bandage. The triangular bandage is best suited for first aid because it can be easily made, can be used in so many different ways, and is not difficult to apply. There are three general ways in which the triangular bandage can be used: the unfolded triangle, the folded triangle, and the folded narrow bandage sometimes called the cravat bandage.

The prepared triangular bandage has the advantage of having many different methods of application. Unfolded, it can be used in the following ways:

1. The triangular bandage as an arm-sling: Place one end of the bandage over the uninjured shoulder, placing the point

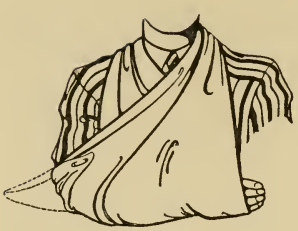


Fig. 2



Fig. 3

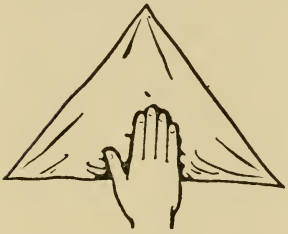






Fig. 4

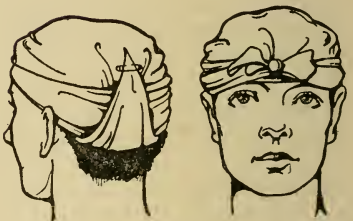


Fig. 5



Fig. 6

of the triangle under the injured arm, then take the lower end of the bandage up over the injured side and tie to upper end behind the neck. (Fig. 2). Another good arm-sling can be made by pinning the shirt or coat sleeve to the shirt or coat.

2. The triangular bandage as a foot-bandage: Place the foot in the center of the bandage, toes toward the point. Then bring the point up over the toes to the instep, next bring the ends up across the instep and tie behind the ankle. (Fig. 3).

3. The triangular bandage as a hand-bandage: The hand-bandage is applied exactly like the foot-bandage. The hand is placed palm down in the center of the triangle, fingers toward the point. The point is then turned up over the back of the hand, the ends brought up over the hand around the wrist and tied. (Fig. 4).

4. The triangular bandage as a head-bandage: As a head-bandage, fold a hem on the long side of the bandage, place the hem on the forehead just above the eyes with point to back of the head, then carry the two ends of the bandage around to the head above the ears, cross them at the back, bring around and tie in front, drawing the point down tight, then turn up over the head and pin. (Fig. 5).

The Cravat Bandage. The cravat bandage can be used in a number of ways. To make this bandage, bring the point of the triangle to the center of opposite side and fold lengthwise three times.

1. The cravat bandage as an eye-bandage: Place the center of the cravat over the injured eye, bring ends around the head and tie at the back of the head. (Fig. 6).

2. The cravat bandage as a bandage for the jaw: In this case two cravats are necessary. Apply center of one across the chin in front and tie in back of the neck. Place center of the other under the chin, tie over the top of the head or cross on top of the head and tie under chin. (Fig. 7).

3. The cravat bandage as a neck-bandage: The cravat bandage can be used to cover the neck as any neck scarf. (Fig. 8).

4. The cravat bandage as a bandage for palm of the hand: Place the cravat across the palm of the hand, then cross at the back of the hand and again at the front of the wrist, bring around and tie at the back of the wrist. (Fig. 9).

5. The cravat bandage used to keep splints in place or dressings on extremities: In this case it is simply carried around and tied in a suitable place. The number of cravats necessary will depend on the size of the splints or dressing being used.



Fig. 7



Fig. 8

The Roller Bandage. The roller bandage can be used for any of the conditions described. To apply correctly it requires more practice and skill than the triangle bandage. The general rules covering application of the roller bandage are as follows: The best roller bandage is made of gauze or cheesecloth, although any material may be used. It can be purchased in different sizes. (Every boy should know how to roll his own bandage.)

1. The bandage is applied by holding the roll in the right hand and the loose end in the left, unless, of course, you are left-handed. Place end on the desired spot and start unrolling the bandage.

2. When unrolling the bandage, hold it in the right hand so that the thumb is on the outer side and unroll after the manner of unrolling a carpet.

3. Be careful in applying roller bandage that the bandage is not drawn too tight. Be especially careful if it is being applied around a splint, because of the probable later swelling of the part. If finger or toes of bandaged limb begin to show blue or there is numbness or pain, loosen the bandage at once.

4. Always apply bandage over a splint and not under it.

5. Bandage from extremities towards the heart, leaving tips of fingers or toes uncovered so that they may be observed.



Fig. 9

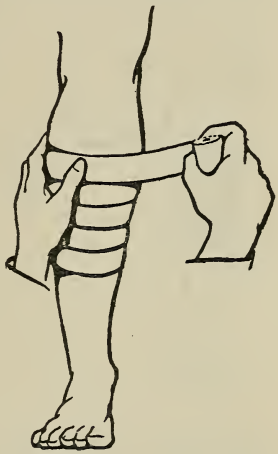


Fig. 10

6. Place the parts to be bandaged in the position in which you wish them to remain, bearing in mind that changing to a new position may cut off circulation.

7. In bandaging a wound immediately, remember that swelling may occur. Be ready to remove or loosen bandage at once when such swelling causes it to become too tight.

8. Roller bandages are applied in several ways, depending on the condition and shape of the part injured. The simplest method of application is the circular, but this is used to advantage only when the part to be bandaged is of the same circumference throughout. The circular method consists of a series of circular turns from below upward, each time overlapping the upper

third of the previous lap. (Fig. 10). Both edges of the bandage should be flat on the skin. When the part is larger at one end than the other, use the circular method as long as both edges touch the skin and turns over-lap, but when spaces are left between laps, another method, called the spiral reverse, must be resorted to.

To make the spiral reverse, place the thumb on the lower edge of the bandage, hold it slack for about three inches and turn the bandage one-half over toward you and continue on around

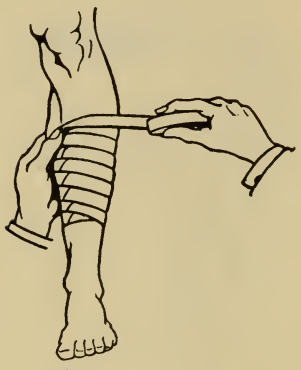


Fig. 11



Fig. 12

the wounded part in the same direction, reverse again at the proper place. The reverses should be in center of the limb or at its outer side and all reverses should be in one line up the limb. (Fig. 11).

The figure-eight method is a useful method in bandaging around joints or in going around a right-angled course such as the heel or the elbow. (Fig. 12). It consist of a series of loops, each overlapping the other by two-thirds of the width of the bandage at the middle part of the eight where the bandage crosses, one loop going over and the other below the joint. This bandage does not cover the tip of the joint. To cover the tip of the joint, place the first turn of the bandage over the tip the joint, then place one turn above and one below and you come immediately into a figure eight.

The Use of Compresses. Under the treatment of wounds, compresses were mentioned. A compress is simply something which is used to press and cover an open wound. It should be large enough to cover the wound completely and lap over it at least one or two inches, according to the size of the wound. They are made preferably of antiseptic gauze or sterilized cheesecloth.

These compresses must be as nearly as possible surgically clean and absolutely free from bacteria. If material is not clean, it should be disinfected by boiling. Then great care should be taken not to contaminate again by handling before applying to wound. Clean gauze can be had at any drug store. The Red Cross First Aid Package contains a sterile compress and by following directions, can be applied so that the wound does not become infected. Too much emphasis cannot be laid on the use of the sterile compress and prevention of infection of wounds.

Splints. Splints are used primarily to stop movement of a broken bone while it is knitting, and must therefore be of stiff, rigid material. Such material as light wood, shingles, cardboard, broom handles, umbrellas, canes, rolls of cloth or pillows with board outside, may be used in emergencies. Splints should be long enough to stop movement in the nearest joint above or joint below and should be as wide as the limb if possible. They should always be padded on the side toward the limb; cotton, waste flannel or pieces of cloth may be used for this purpose. Splints must be bandaged tight enough to prevent slipping or movement but not so tight as to stop circulation. Great care and special attention should be given to this point.

Injuries in Which the Skin Is Not Broken

Fractures. When a bone is broken you call it a fracture. It is a very common injury. A simple fracture is one in which the skin is not broken or pierced. A compound fracture is one in which the skin is pierced. Poor handling of a simple fracture may result in a compound fracture.

In most cases of simple fracture first make the patient as comfortable as possible and then call a doctor. If the injury is such that you think a bone is broken, treat as a fracture without

further examination. If the doctor is expected soon, nothing else need be done unless there is shock; if so, treat for that (see page 304).

In applying splints any kind of bandage may be used: handkerchiefs, pieces of clothing, and the like. A sling may even have to be constructed. For this a large handkerchief or towel can be used.

A compound fracture is much more serious. The skin may be broken and there may be infection and months of sickness may result. Sometimes the wound leads to the bone or the bone may even protrude through the flesh and result in infection of the bone. This is very serious; send for a doctor at once. Allow nothing to touch the wound. If necessary, cut away clothing and expose the wound. Apply a sterile compress if you have one. Do not attempt to restore the bone if it protrudes through the skin. Always treat the wound first, then the fracture. If patient must be moved, apply best splints available with greatest care so there will be no motion in the broken part. Use greatest possible care in moving, avoiding jars or sharp bumps.

Dislocation. Dislocations are injuries of the joints and are due to the head of the joint slipping out of the joint-socket. When this takes place, the ligaments which normally keep the bone in place are often torn loose. The most common dislocation is that of the shoulder joint. The dislocation of the jaw and fingers, however, is not uncommon. The noticeable deformity, the unusual appearance as compared with the uninjured side, and the limited motion help in making sure that the difficulty is a dislocation.

Send for a doctor at once and, except in dislocation of the jaw or fingers, wait until he arrives. When no attempt is made to replace the dislocation, make the patient as comfortable as possible and treat with cloths wrung out in very hot water.

Dislocation of the jaw. To reduce this dislocation wrap both thumbs with bandage so they will be protected from injury. Place both thumbs on lower teeth, each side of lower jaw. Press first down and then back. As soon as the jaw starts into place, slide thumbs off the teeth and withdraw them for as the jaw springs into place it is apt to injure them.

Dislocated fingers can be reduced without great difficulty. Firmly grasp dislocated finger on hand side, pull the end of the finger straight away from the hand and it will usually slip into place.

Bruises. Very often a severe bruise results in the flesh turning black and blue. For a severe bruise apply hot or cold water to keep down the swelling.

Sprains. A sprain is an injury to the ligaments and tendons around a joint. Swelling and pain always follow a sprain. Cold cloths will often keep down the swelling. Later treatment is to alternate with hot and cold cloths over the joint. Use liniments and massage. Repeat treatments a number of times a day. Using the joint, if unnecessary, is foolish. Rest is needed and sometimes even a splint is advisable. Support with figure eight bandage.

Carrying the Injured

First aid should always be given before a patient is moved; if injury is severe, do not move unless absolutely necessary until doctor arrives.

During transportation, clothing should be loosened. Patient should be kept warm and made comfortable as possible.

The method of transportation will vary according to the injury. It is always safer to carry patient lying down and a

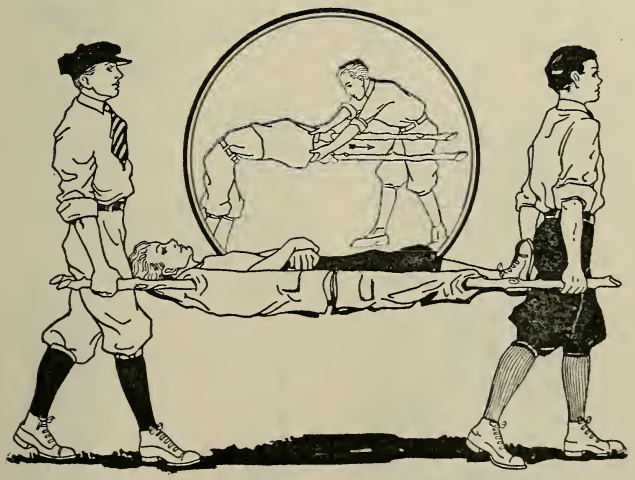


Fig. 13

stretcher can be improvised as shown in Fig. 13. Other methods of transportation are given in the illustrations and explain themselves. These carries can be used in relay races and every boy should know them.



Fig. 14



Fig. 15





Fig. 16



Fig. 17

ARTIFICIAL RESPIRATION

There are two methods of artificial respiration, the Sylvester and Schafer methods. Of the two, Schafer's, the better one, will be described.

Place the patient face down with a folded coat or pillow under the chest, the head turned to one side and mouth opened. Be sure that tongue is not obstructing passage to the throat. Place the outspread hands on the small of patient's back, so that the thumbs nearly meet on either side of the backbone and the little fingers lie along the lower ribs. Lean forward, keeping the arms straight, slowly produce firm downward pressure in order to decrease size of chest cavity and press all the air possible out of the lungs. Then release pressure quickly, applying a little sudden pressure just at the end. Then allow the lungs to fill with air again because of their natural elasticity. As pressure is applied and released to obtain the right rhythm of breathing repeat some phrase as "one thousand and one, one thousand and two," exerting pressure slowly on the first part of the phrase, releasing rapidly as described on the second part. Repeat until patient is breathing properly.

Artificial respiration should always be consistently used while waiting for a doctor when trying to resuscitate a drowning person, or one suffering from electric shock or gas asphyxiation (see page 153).

Burns, Frostbite, and Freezing

Burns when extensive are very serious and may demand treatment for shock and the administration of stimulants. A doctor should be called in such a case. Three degrees of burns are usually described, depending on the depth to which the heat penetrates: In the first degree, the skin is reddened and smarts; in the second degree, the skin is reddened, there is noticeable swelling and often there are blisters; in the third degree, the skin is usually scorched or blackened. There is swelling and great pain. The burn has penetrated below the skin.

Treatment for burns of the first degree: Bathe with baking soda in water or with olive oil, lard, carbolized vaseline, boric acid, ointment, or wet compresses.

Treatment for burns of the second degree: Pierce the blisters at the edge with a sterile needle and apply remedies as above. Cover all surfaces with sterile compress. Infection can take place here as in any other wound.

Treatment for burns of the third degree: Call a doctor at once. Treat for shock. Cover burns with clean cloths wet in baking soda solution.

Burns from acids should be washed with solution of baking powder immediately.

Burns from lye or alkalis should be treated quickly with vinegar and water, then dressed as above.

Frostbite and Freezing. The effect of long exposure to cold is to make the fingers, toes, nose, or ears numb, white, and hard. On coming into a warm place they become red and swollen, and itch. Rub frozen parts with snow or cold water. As soon as circulation is established and sensation returns the parts will be painful and probably swell. This disappears, however, and usually there is little or no more trouble.

When a person is nearly frozen, the whole body is affected and unconsciousness may result. When treating such a person, the

patient should be kept in a cool place for hours and the frozen parts rubbed with snow or wrapped in cold wet cloths. A stimulant should be given, plenty of coffee or tea. The temperature of the room should be raised gradually. Final removal to a warm room should be made with greatest care.

Poisoning

In any case of poisoning there are three things to be done: First: Send for a doctor. Second: Empty the stomach of the poison. Third: Give an antidote. An antidote is something that neutralizes the poison.

An emetic may be given to empty the stomach, such as a teaspoonful of mustard in a glass of warm water, or a solution of salt in warm water, or even soapsuds. Mechanical emetics may also be used to accomplish the same end, such as tickling the back of the throat with the finger or with a feather. If poison still remains, have patient drink more water and go through the same procedure again. After vomiting freely, the patient should drink a large amount of milk, and eat raw eggs or a quantity of gruel made of milk and flour.

Besides the remedies already suggested, the general condition of the patient must be watched. Shock follows poisoning very often and should be treated at once. Stimulants, heat, and even artificial respiration should be given if breathing is feeble or has stopped.

Common Emergencies

Nosebleed. Usually nosebleed will stop of itself. If it does not, then place roll of paper lightly under the upper lip, press lip between nostrils, or apply something cold to the back of the neck. Avoid blowing or picking the nose because this dislodges the blood clot and bleeding will commence again.

Toothache. This is usually due to a cavity in the tooth. Clean the cavity out with cotton twisted on the end of a tooth pick. Then soak small piece of cotton in oil of cloves or camphor, squeeze dry and place in cavity. This will usually give relief. Have dentist see it at once and have the teeth examined for other difficulties.

Earache. A number of remedies are used in earache: hot cloths, hot water bottle, and a bag of hot salt are helpful. A few drops of hot sweet oil and a plug of cotton often give relief. Severe earache always demands the services of a doctor as disease of the middle ear may result in breaking of the ear-drum which may be prevented if treated in time.

Something in the Eye. Do not rub the eye. Keep it shut, allowing tears to come freely and then lift the upper lid away from the eye-ball, pulling it down over the lower lid. This will ofttimes dislodge the offending particle. Blowing the nose hard several times is helpful. You may need the help of another party to look carefully into the eye and to remove the particle with the twisted corner of a clean handkerchief or cotton swab. It is easy to see the under side of the lower lid, but rather hard to see the under side of the upper lid. To turn the upper lid up, place a slender pencil at the natural wrinkle and press gently in and down while with the other hand you grasp the eye-lashes and pull them outward and upward, thus exposing the under side of the upper lid. The particle can then usually be seen and removed. When the particle is embedded in the eye-ball and cannot be removed, see a doctor at once.

Cramps, Stomachache. As everyone knows, cramps are severe pains in the abdomen, probably due to indigestible or unwholesome food. A hot water bottle placed on the abdomen, accompanied by rubbing, often gives relief. A teaspoonful of soda in glass of hot water or spirits of peppermint or ginger are often helpful. Indigestible matter may be gotten rid of by vomiting or by the aid of a cathartic, such as Epsom salts or Seidlitz powder. If pain continues, call a doctor because such trouble might easily develop into appendicitis.

Diarrhea. Diarrhea is caused by bad food mixture or medicine. It may be just a few extra movements with no general ill feeling. However, diarrhea from spoiled food may result in serious illness. A quick purge should be taken, such as a dose of Epsom salts, repeated in three hours if necessary. This will tend to increase the diarrhea at first, but will gradually improve conditions. If there is no relief, better see a doctor at once.

Poison Ivy and Poison Oak. Certain types of wild ivy, sometimes called oak, produce a bad poison. The poison is a heavy oil

and spreads easily especially when brought into contact with a person who is perspiring. The oil causes an irritating itch, often a red rash which, unless promptly treated, rapidly develops into blisters accompanied by swelling. First wash with strong soapsuds and dry. Then wash well with alcohol if it is available. Follow this with generous application of the following:

Carbolic Acid—½ dram
Zinc Oxide —½ ounce
Lime Water—4 ounces

Permanganate of potash in mild solution is also helpful, or a ten per cent solution of guendelia.

Sunburn. No matter how much is said about prevention of sunburn, remedies for the same will always be needed. Any soothing ointment is good. If there are blisters and the shoulders are painful after the ointment has been applied, cover with sterile gauze.



CHAPTER XIX

SAFETY FIRST[1]

R. T. Wyse

Fifty per cent of the deaths by accident are entirely unnecessary—a sad commentary on the law that "Self-preservation is the first law of life." Life should not be risked except for a great cause, but many of us do it continually and thoughtlessly with no other purpose than unnecessarily saving a little time. Alertness as to personal safety has been dulled by the protections of civilization by which man feels himself surrounded. This and the selfishness which makes us heedless of our responsibility for our brother's life, are the causes of most of the dangers which surround us.

If we were to plan thoughtfully to live more wisely in this regard, and to take no chances for ourselves or others we would find immediately that we have much to learn. Our education has been much at fault. Most of us have not been taught those things about our personal well-being and safety that are vital. Herbert Spencer in his book on "Education" writes most scathingly. "Do but consider for a moment . . . that there are twenty ways of going wrong to one way of going right; and you will get some idea of the enormous mischief that is almost everywhere inflicted by the thoughtless, haphazard system in common use." He then refers to the savages who in a cold climate reject warm blankets for a string of beads, and says our mental preferences in education are just as barbaric and unreasonable, as most of us prefer to shine and make ourselves conspicuous by

[1] Reprinted by permission from The Canadian Standard Efficiency Training "Manual for Tuxis Boys," copyrighted, Canada, 1918, by the Committee on Canadian Standard Effiicency Training.

exhibiting a knowledge of impressive but unpractical learning while utterly neglecting training in the things that are vitally necessary.

Accidents go on increasing—almost as destructive during each year of peace as if a great war were going on. Though sanitary laws and protective devices increase, inventions involving danger also increase. In the United States alone over 2,000,000 accidents occur yearly.

Falls

The highest toll is from falls. As half of all these are unnecessary, the majority must be from the foolishness of taking chances or the selfishness of not considering the safety of others. Men working in high places without proper protection against falling or without nets provided in case of a fall; the improper placing of ladders (ladders constituting one-third of accidents from falls); the falling on sharp instruments (pitchforks, sharp tools, boards with nails up, rakes, etc.); trap doors left open; holes or excavations of any kind left uncovered or unlighted; rope or wire left in dangerous places; cellar or attic stairs not properly lighted, etc., cause most of these accidents. Many falls are occasioned by the slovenly and selfish habit of leaving someone else to clear away the confusion and littered condition you have yourself created. Myriads of small things, as the banana or orange peel on the sidewalk, a loose heel on the shoe, and icy steps with no ashes thrown on them, account for many falls.

Accidents on Railways

The next largest number occur on railways.

While the railroad management is held responsible, some individual employe is generally to blame. But outside of those injured while legitimately traveling on the railway or those injured in the employ of the railway, fourteen people are killed every day by trespassing. Keep off the track.

Do not use the railway track as a route of travel, even for a short distance, and do not use railway bridges no matter how long a detour you may have to make. Keep out of railroad yards. Do not board or leave a moving train nor crawl under lowered gates.

Drowning

The next largest number of deaths from accidents yearly is from drowning. Naturally the answer is, learn to swim. Learning to swim should be compulsory and the ability to swim as universal as walking, for man is often helpless on and in the water if he does not know how to swim.

If you want to own a canoe, make up your mind to learn to swim first and to paddle afterwards. People usually reverse the order. No one should take out in a canoe anyone who cannot swim. Canoes may be upset by such trifles as a violent fit of laughter. Don't take chances with the weather, especially on the large lakes. Consult some old sailor or experienced shorehand if the water looks at all rough or the wind is high. It is the greenhorn who takes risks, especially with horses and boats, which are uncertain elements. An old sailor can always give you good advice. I saw two young men drowned within half an hour after laughing at the warning of an old sailor. I had intended to go out but saw that the wind was blowing strong offshore and heard the old man advising those fellows, both of whom could swim and paddle. It became still rougher and the wind was so strong off-shore that they could not get back. In canoes or rowboats, people should absolutely never change seats.

On the lakes in rough weather, a motor boat that is too large to be handled with oars must be managed carefully, for if the engines go wrong in such a craft, you are more helpless than you are in a rowboat which by skill and strength you can, in ordinary seas, keep at right angles with the waves. Even if you ship some water in a rowboat, you are comparatively safe if you take the waves as nearly at right angles as possible, riding straight over them, not between them. If you once lie in the trough of the sea, you are in great danger, and that is what happens to the motor boat if it becomes helpless.

In swimming do not go out far unless you are in hailing distance of boats or other swimmers, for in our cold waters cramps are possible even to the best swimmers, who should always be escorted on long swims even when keeping comparatively near shore though, of course, in deep water. No one should be so foolhardy as to go in swimming from a shore with no one in sight. Unless you are a good swimmer, do not go into any water

until you know the character of the bottom. Avoid any place where there is an undertow. Learn to swim on your back and to float, as without this knowledge you are of very little use to yourself and others in any real emergency.

Fire

The next largest number of accidents is from fire—more than fifty per cent unnecessary. Even when it is caused by wiring it is often from careless work.

All closets, cupboards, attics, and the like, should be kept clean and free from litter.

Keep matches in a covered metal box. Be most careful how you dispose of a lighted match. Avoid taking ashes from stove or furnace until they are cold. Do not take a lighted match into a room in which you smell gas. When at any hotel, notice the location of fire escapes and stairs and which passages lead to them. Smoking should never be allowed in a stable or in a garage where gasoline is kept in large quantities.

If the house in which you are, or any person or thing in it, catches fire, close doors and windows promptly to exclude draft and smother the fire with rugs or bedding or garments, preferably of wool.

The practice of closing as many doors as possible at night, particularly the kitchen door, is a good precaution. Never leave any halls or passageways obstructed after dark.

Campfires must be entirely extinguished before leaving camp. Carelessness in this matter is a criminal offense, as some of our most disastrous forest fires are started in this way.

If your clothing catches fire, never run for assistance. If there is nothing at hand with which to wrap yourself to smother it, lie down and roll over slowly, beating and fighting the flames with your hands and arms. Do exactly the same to anyone else.

Do not jump from windows of burning buildings, unless it is the only means of escape. Within six inches of the floor there will be no smoke to speak of, so crawl along with your face as near the floor as possible. If you can wring your handkerchief in water and tie it over your mouth and nose you will find it an effective mask.

If you see a burning building, alarm the inmates and then ring the fire alarm. Outside a burning house borrow bedding, mattresses, and pillows from the neighborhood and place under windows at which people are seen. In case of fire, always think of others beside yourself in making your escape and do your share of warning or assisting.

Be careful not to spill gasoline in using it and never use it near fires or lamps, or in a closed room.

Gasoline also should never be stored except in approved receptacles. Burn up any oily rags as soon as you have used them, as spontaneous combustion is liable to take place.

Keep others from panic and do not lose your head.

Poisons

Poisons should never be kept with harmless things. Always put them in a special place, preferably under lock and key. Bottles should have some distinctive color or shape, that may be recognized by touch in the dark.

For poisons, take an emetic immediately, salt or mustard water being the most common available. An acid is an exception to this rule. Swallow in this case white of egg, flour and water, or milk in quantities to neutralize the acid. For an alkali, take lemon juice or vinegar.

There are myriad forms of menace to life everywhere which, if enumerated, would fill a volume. These are merely a few suggestions. Safety instructions and protection in industrial work form a separate subject by itself. What people are now organizing to accomplish is a universal training by which we may be quick, alert to see danger signals, and thus avoid danger. We must educate ourselves to be a protection to others as well as to ourselves. As a result of the present crusade accidents are beginning to show a decrease. The necessary persistent labor entailed has been against apathy—lack of appreciation and even ridicule.

We want first of all to rid ourselves of one of the besetting sins of our age—the habit of undue haste. This is a fertile cause of

many of the foolish things people do. In order to promote safety, we need to cultivate:

1. Observation.
2. Mental alertness—to form conclusions and act quickly.
3. Unselfishness—which constitutes us our brother's keeper.
4. The necessary knowledge of what to do in an emergency.



CHAPTER XX

PATRIOTISM AND CITIZENSHIP

The words "patriotism," "patriotic," and "patriot" have their origin back in the days of the Romans and the Greeks, and perhaps still farther back in the dim past. The "root" of the word is "pa," which means "to feed," as may be recognized in the word "pasture" and also the word "pastor," an expression growing out of Jesus' calling himself a shepherd and so many times referring to the people, in parable and by illustration, as sheep.

By a slight change in the meaning of the root, it came to signify "to provide for," "to protect," "to care for," and so has given us the familiar word "papa," just as the Greek word and the Latin word mean "father." Upon this root they built another word meaning "fatherland," and this is the idea in patriotism, which means "love of fatherland." Patriotism, therefore, may be defined as devotion to the best interests of one's country. Wherever you see a man or a boy so devoted, mark him well, for he is a true patriot. Just as it is expected that in return for a father's care and devotion a boy should love his parent, so should one love his country for the protection and advantages it affords, and for the opportunities it gives one to serve.

With the passing years Americans have had more reason to become attached to their country; first, because America has grown so much larger than the original thirteen colonies that there has been really more of it to love and care for; and, second, every time it has been attacked in any way it has cost more—not only in money but in human lives—to guard and protect those principles of freedom, equality, and brotherhood upon which it was founded, which make it that "sweet land of liberty" of which

we delight to sing, and for which so many have been willing to die. In gratitude to all those who have given their lives, on the battlefield and in the fight against selfishness, greed, crime, vice, graft, poverty, filth, and the like, we should love the "land of the free and the home of the brave" we call "America" and do all we can to help protect it.

Year by year, and century by century, the picture gallery in the American patriots' "Hall of Fame" grows ever larger. This is as it should be, but no matter how long this gallery may become there will be found in it certain portraits of men whose patriotism and citizenship stand out more clearly and more strongly to true citizens and lovers of their country than the portraits of the others. This greater prominence is due them because of the exceptionally great services which they were privileged to render to their country at some great time of crisis.

If we divide our history into the three commonly accepted periods, namely, the Colonial Period, the Period of Division and Reunion, and the Modern Period, no boy will be in doubt as to what portraits are referred to. Since the portrait of Theodore Roosevelt will be found in another section of this handbook, we shall content ourselves here with a brief statement of the lives of the other two.

George Washington

The central figure of the Colonial Period, and "with the exception of Lincoln, the greatest of all Americans," was George Washington. The story of this great hero and patriot is still as fresh and inspiring as though he had lived but yesterday, and will remain so as long as the history of the United States shall be read or told. It would be a shame if any boy did not know something of his manly character and qualities, and of the great service which he rendered to his country—that service which justly entitles him to be called the "Father of his Country."

Born February 22, 1732, on a Virginia plantation, he grew to be a tall, strong boy, fond of all outdoor sports and games. In the country school where he learned to read, write, and cipher, he took the lead in all trials of strength and in all deeds of daring. He could run faster, jump farther, and throw a stone higher than any of his playmates.

His father having died when he was eleven years of age, he soon went to live with his eldest brother at Mount Vernon, where he took up the study of surveying, and spent three years surveying the vast estate of Lord Fairfax, stretching away across the mountains of northern Virginia. As a result of his care and accuracy in this task, the governor of Virginia made him public surveyor.

Every schoolboy has learned of the part he played in the French and Indian Wars, and how the military experience thus gained made him the best fitted to undertake the command of the Continental Army when the War of the American Revolution broke out. His victories over the British at Trenton and Princeton, that awful winter at Valley Forge, and his capture of Lord Cornwallis at Yorktown with the aid of the French under Lafayette, are well known to every one.

Then came his election to the Presidency for the first, and then a second time, with a refusal to be considered for a third term. His "Farewell Address" is studied in countless schools throughout the land. It is full of wise and wholesome advice. "Beware of attacks upon the Constitution. Beware of those who think more of their party than of their country. Promote education. Observe justice. Treat with good faith all nations. Adhere to the right. Be united. Love your country," are some of the things he said.

Having made America free, and having stood at the helm until this new government, this new "ship of state," was well started on its course, he retired to his home at Mount Vernon for the remaining two years of his life. At his death, which occurred December 14, 1799, many people in England and France joined America in mourning for him; for all men honored his memory. "First in war, first in peace, first in the hearts of his countrymen," was the tribute paid him. Today his name stands among those of the greatest men in the history of the world.

Abraham Lincoln

As no one could understand the history of the Colonial Period without knowing of George Washington and what he did to earn the title of the "Father of his Country," so no one can understand the Period of Division and Reunion without knowing about the

man who is justly called the "Savior of his Country," Abraham Lincoln.

Lincoln was born near Hodgensville, Kentucky, February 12, 1809. He came of what might naturally be considered the most unpromising stock, the "poor whites" or mountain people of the South. His father moved from place to place in the then frontier country—Kentucky, Indiana, and Illinois.

Young Lincoln had to work very hard at the roughest kind of work, but aided by his stepmother and an occasional "traveling schoolteacher" he learned to read, write, and cipher. Altogether, his "schooling" did not amount to a twelve-month, but he became filled with a high and noble purpose, and determined to learn. When the rest of the family had gone to bed, he would sit up and read his favorite books by the light of the great blazing logs in the fireplace. His treasures were the Bible, "Robinson Crusoe," "Pilgrim's Progress," "Æsop's Fables," and a Life of Washington. He had worked hard for three days for a crusty old farmer to pay for the last-named book, which he had borrowed and which had been damaged by rain blown in upon it between the logs of his "bedroom."

At sixteen years of age he walked fifteen miles to attend a session of the court. Tall and very slim, barefoot, dressed in a jean coat and buckskin trousers, he must have presented a strange sight; the more so when he arose to compliment the old and practiced lawyer who had just completed his speech for the defense. He was now determined to become a lawyer. He walked twelve miles to borrow a copy of the laws of Indiana.

He clerked in a store for one year; acted as surveyor; piloted boats on the Mississippi to New Orleans; served as captain in the Black Hawk War; ran for the Illinois legislature (1832), was defeated, but later served three successive terms; studied law while in the legislature, and later moved to Springfield to practice it. In 1846, at thirty-nine years of age, he was sent to Congress from Illinois, returning then to Springfield to continue his law practice.

Then came, in 1858, his public debates with "The Little Giant," Stephen A. Douglas, which made Lincoln famous not only in his own state but throughout the East, because of his masterful debate and searching knowledge of conditions and principles.

Two years later (1860) he was nominated for the Presidency, elected in November of that year, and inaugurated March 4, 1861. The cotton-growing states of the South, believing that Lincoln's well-known attitude on the slavery question meant depriving them of their rights with reference to slave holding, decided to leave the Union. Then came the war, in the course of which he freed the slaves by the Emancipation Proclamation, issued September 22, 1862, and effective January first following.

A second time Lincoln was elected to the Presidency, and inaugurated March 4, 1865. At the close of his address on this occasion he spoke these beautiful words:

"With malice toward none, with charity for all, with firmness in the right as God gives us to see the right, let us strive on to finish the work we are in; to bind up the nation's wounds; to care for him who shall have borne the battle, and for his widow and for his orphan; to do all which may achieve and cherish a just and lasting peace among ourselves, and with all nations."

The war ended April 9, 1865. Five days later, on the evening of Good Friday, the President was shot in Ford's Theater, Washington, by an assassin who mistakenly thought he was rendering the South a service. On the following morning he died, aged fifty-six years. He was mourned by the North and South alike. Secretary of War Stanton had been present at the bedside, and after the great spirit had departed, he said, "Now he belongs to the ages."

In the history of the world there is no life-story more full of lessons of perseverance, of patience, of honor, of true nobility of purpose than that of Abraham Lincoln. Among the great men of all time there has been no one more truly great than he.

Democracy

At the outbreak of the great World War in 1914, the minds of men throughout the world were divided for a time over the question of the real responsibility for it and the deeper causes underlying it. As the War progressed, however, there emerged gradually, but none the less surely, the main issues at stake until at last it came clearly to be seen that the deep, underlying issue of the conflict, in the words of President Wilson, was to "make the world safe for democracy." As much as this word democracy has

been thought of and talked about in the past, there is no doubt that we shall hear much more of it in the future, for with the mighty conflict over, the whole world has become increasingly interested in the principles of true democracy. Just what are these principles? They can be explained in many ways, but can be summed up conveniently in the three-word motto adopted by France in her revolutionary period at the beginning of the nineteenth century: "Liberty, Equality, Fraternity."

Liberty means, in the United States, not the right of license, to do absolutely as one pleases, utterly regardless of the rights and comforts of others, but freedom to think and act according to the guidance of one's conscience and one's reason in accord with the laws of the land.

Equality means, in the words of the Declaration of Independence, that "all men are created equal"—not in the sense that all men, women, and children come into the world with equal intellectual, emotional, or social endowments or gifts, but equal in the sense that they have the same rights in the eyes of the law, and before that law have the same privileges and opportunities of "life, liberty, and the pursuit of happiness."

Fraternity means, a spirit of "brotherly love," a friendly and mutual cooperation in the common tasks of safeguarding and increasing the intellectual, economic, moral, social, and spiritual interests of our democracy and of mankind.

In carrying out these principles we shall be guided by that same chart and compass which has brought us thus far on our destiny, the Constitution of the United States of America—the guarantee of that "more perfect union" which shall "establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity."

State Governments

The forty-eight states of the American Union are self-governing parts of the United States. They do not exist primarily or incidentally to help the national government, over which they have no power. In a very real sense they are uncontrolled by the national government, being free to make their own state constitutions and frame their governments as they desire, provided

it is republican in form and does not conflict with the United States Constitution.

As a result we find great differences in detail between state laws, particularly if the states are widely separated, geographically or in date of admission, but with all this freedom and these differences, it is remarkable how much alike states are in the fundamental principles underlying their form of government.

All states have both central and local governments. Like the federal government, the central governments consist of three departments—the executive, legislative, and judicial. The executive department is made up of the governor and other administrative officials. The legislatures meet every two years, and are made up of two houses—a senate and a house of representatives. In some states the latter is called the assembly. There is always at least one state court besides the minor ones.

The local governments refer to those in counties, cities, towns, and villages. This is "home rule," whereby the people govern themselves at home through the men they choose to transact their public business or affairs of state for them. Not only so, but it is by the ballots of the citizens of these same counties, cities, towns, and villages that men are chosen to represent them in governing the state and the nation. Here, then, is the fountain-head of our democracy, the source of all we mean by our "government." When these men are chosen wisely and for their fitness, not only the locality benefits but also the state and the nation; when other considerations determine the selection of representatives the whole nation suffers. More and more it is the duty of all citizens to see that only the best men are elected to office. So it is the duty of all coming citizens to learn the true purpose of government and the means to bring it about, so that when they reach their majority they will have an intelligent understanding of what is expected of them as citizens of the United States and fellow-citizens of the world.

Citizenship

In the language of the Fourteenth Amendment to the Constitution, "all persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the state wherein they reside." Three things are

here emphasized. First, the mere fact that one is born in the United States makes him or her a citizen. It does not matter, then, whether the parents were born in another country or not. Second, people from other countries may become citizens, if they so desire, provided they have filed their "declaration of intention" with the proper court official when at least eighteen years of age, and have proved five years' residence in the United States. By a recent act of Congress, three years' service in the army or navy of the United States may be substituted for the five years' residence. Third, whoever possesses citizenship at all, is a citizen of the United States and of the state in which he lives. He cannot be a citizen of the United States alone, or only of a state, he must be a citizen of both or neither; the two-fold character of his citizenship cannot be separated. Thus citizenship in the United States illustrates the double character of the government, central or federal, and state or local.

All the above leads very naturally to the questions: What is a citizen? Of what does citizenship consist? A citizen is a member of one of the states and of the nation. As such he has certain rights, privileges, and duties, and the sum total of these constitutes his citizenship. Among the rights and privileges are: protection of life and property, whether at home or abroad; suffrage; freedom of speech and press on all political, social, economic, moral, and religious questions, except for such special restrictions as may be made in time of war; peaceable assembly; and trial by a jury composed of fellow-citizens. In short, citizenship implies the right to think and act at one's pleasure, provided in so doing one does not violate the provisions of the national Constitution and that of the state in which he resides; and provided, further, that he does not interfere with any other citizen or citizens in the exercise of their rights.

Citizenship also carries with it certain important duties, the chief of which are: to protect, uphold, and defend the Constitution of the United States, the laws of Congress, the state, and the local community—even at the cost of life or limb; to obey these laws, together with the ideals and standards of the nation; to exercise the right of suffrage in the most intelligent manner; to serve on juries; to inform oneself on all civic and political matters submitted to his judgment and decision; in fact, to take an

active interest in all movements looking to the peace, prosperity, and happiness of mankind—which is the true aim of all government. As a tree is known by its fruits, so is a nation known by its standards of citizenship and the degree to which it attains them.

Americanism

Much talk has been heard of late touching "Americanism." Certain books, magazines, newspapers, and speeches refer frequently to the subject. There have been also many public men whose lives and teachings have been devoted to this noble purpose. Among these there has been no more fitting example than the life, writings, and speeches of Theodore Roosevelt. His whole career was marked by those qualities and principles we mean by the term "Americanism." Every boy in the land should read such a book as Hermann Hagedorn's "The Boy's Life of Theodore Roosevelt" for a better understanding of what practical patriotism means.

Briefly stated, Americanism may be defined as an attitude of mind upholding certain principles, among which should always be listed: that man has God-given rights which no human laws may nullify, such as life, liberty, and the pursuit of happiness; that government shall be of laws, not men; that laws shall be enacted through representatives elected by general suffrage; that the welfare of all must always prevail over special privileges to the individual; that the will of the majority shall be the guide in all civic, legislative, and judicial procedure; that the enjoyment of citizenship implies corresponding obligations in the way of personal service by each for all, in upholding the law, and in the orderly administration of all measures enacted by the people's representatives. Americanism stands also for the high general intelligence of its citizens, and against all class and race prejudice.

The term "Americanism" is therefore another way to spell *opportunity* for all those to whom the words, Justice, Liberty, Equality, Humanity are so dear.

My Part

Boys are never so happy as when they can be doing things, the bigger the better. To be a good citizen means just that—doing things, some big and some bigger, for one's country. As a citizen and coming voter, you want to play your part in this great, cooperative game for the good of others. What can you do?

The first thing to do is to gain a knowledge both of the government and state in which you live, and of what these both expect of you as a good citizen. The place to begin is in your own city, town, or community. Learn who the public officials of local, state, and national government are, with their respective duties. Acquaint yourself with the work of the various departments, such as police department, fire department, department of parks, public works (including water and light supply and sewage disposal), department of public health, highway department, department of finance, and others; also the method of levying and collecting taxes, the care of the poor, the conducting of public markets, and the granting of franchises and licenses.

More particularly you can cooperate in seeing that streets, parks, and public places are kept free from loose paper, inflammable material, rubbish, and litter of all kinds; that public buildings, park benches, and the like are kept free from all marks and defacement; that birds, trees, and flowers are protected. In going about their respective duties the policeman, the fireman, the street sweeper, and the janitor are glad to count the boyhood of a community their friends, and to have their intelligent sympathy and cooperation. Their work is all a very necessary part of good government, and for the good of society as a whole. Anything that you can do, therefore, to help them do their work more efficiently, no matter how small it may seem to be, is to play the part of the good citizen, and to give you the satisfaction which comes to all who serve their country well. It is for such service that we honor our great men—Washington, Lincoln, Roosevelt, and their kind—who gave freely of their time, their money, and their energy not only to make this "land of the free

and the home of the brave" but also the whole world a better and a happier place in which to live. Their lives are a perfect embodiment of the motto adopted by an Association state camp: "Help the Other Fellow," a motto worthy of being adopted by everyone, because founded on the greatest law of all—the law of love.

THE AMERICAN'S CREED

I believe in the United States of America as a government of the people, by the people, for the people, whose just powers are derived from the consent of the governed; a democracy in a republic; a sovereign Nation of many sovereign States; a perfect Union, one and inseparable, established upon those principles of freedom, equality, justice, and humanity for which American patriots sacrificed their lives and fortunes.

I therefore believe it is my duty to my country to love it; to support its Constitution; to obey its laws; to respect its flag; and to defend it against all enemies.

THE AMERICAN FLAG

"A star for every state and a state for every star."

The History of the American Flag

The flag of one's country is its dearest possession—an emblem of home and country and native land. This is what one thinks and feels when he sees the flag, and this is what it means. Our flag is the emblem of liberty, the emblem of hope, the emblem of peace and good will toward men.

There is a story, quite generally believed, that the first flag was planned and made in 1776 by Betsy Ross, who kept an upholstery shop on Arch Street, Philadelphia, and that this, a year later, was adopted by Congress. The special committee appointed to design a national flag consisted of George Washington, Robert Morris, and Colonel George Ross, uncle of the late husband of Betsy Ross. The star that the committee decided upon had six points, but Mrs. Ross advised the five-pointed star,

which has ever since been used in the United States flag. The flag thus designed was colored by a local artist, and from this colored copy Betsy Ross made the first American flag.

When Washington was in command at Cambridge, in January, 1776, the flag used by him consisted of a banner of thirteen red and white stripes with the British Union Jack in the upper left-hand corner.

The Betsy Ross house has been purchased by the American Flag House and Betsy Ross Memorial Association, and is pointed out as one of the interesting historical places in Philadelphia.

The official history of our flag begins on June 14, 1777, when the American Congress adopted the following resolution proposed by John Adams:

Resolved: That the flag of the thirteen United States be thirteen stripes, alternate red and white; that the Union be thirteen stars, white on a blue field, representing a new constellation.

"We take," said Washington, "the star from Heaven, the red from our mother country, separating it by white stripes, thus showing that we have separated from her, and the white stripes shall go down to posterity representing liberty."

Flag Day

June 14th, the anniversary of the adoption of the flag, is celebrated as Flag Day in many of our states.

In order to show proper respect for the flag, the following rules should be observed:

It should not be hoisted before sunrise nor allowed to remain up after sunset.

At "retreat," sunset, civilian spectators should stand at attention and on the last four strains of the music uncover, holding the headdress top outward, in the right hand, opposite the left shoulder, right forearm against the breast.

When the national colors are passing on parade or review, the spectators should, if walking, halt, and if sitting, rise and stand at attention and uncover.

When the flag is flown at half staff as a sign of mourning, it should be hoisted to full staff at the conclusion of the funeral. In placing the flag at half mast, it should first be hoisted to the top of the staff and then lowered to position, and preliminary to lowering from half staff it should first be raised to top.

On Memorial Day, May 30th, the flag should fly at half mast from sunrise until noon, and full staff from noon to sunset.*

By Act of Congress in 1794, it was determined that the number of both stripes and stars should be fifteen, with the expectation that a new stripe and a new star should be added whenever a new state joined the union. This Act continued in force for twenty-three years, at which time Congress permanently reduced the number of stripes to thirteen, with the provision that on the admission of every new state into the union, one star should be added to the union of the flag. This is still in force, and today there are forty-eight stars in the flag.

Salute to the Flag

"I pledge allegiance to my flag and to the republic for which it stands; one nation indivisible, with liberty and justice for all."

"America, so proud and free,
I give my song, my heart to thee.
Still let thy heav'n-born symbol fly
In ev'ry clime, 'neath every sky;
Still rise a yeoman race, to stand
For God, and home, and native land."

SONGS OF OUR COUNTRY

"America"

The words of "America" were written by Samuel Francis Smith, D.D., while he was a student at Andover Academy (Massachusetts) in the winter of 1831–32. It was first used at a Sunday school celebration in Boston on the Fourth of July. Wherever Americans find themselves, in any part of the globe,

* Taken from the "Sons of the Revolution," state of New York.

its strains find an immediate response in every heart. The tune is that of the English "God Save the King."

My Country, 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died,
Land of the pilgrim's pride,
From every mountain side
Let freedom ring.

My native country, thee,
Land of the noble free,—
Thy name I love;
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills
Like that above.

Let music swell the breeze,
And ring from all the trees
Sweet Freedom's song;
Let mortal tongues awake,
Let all that breathe partake,
Let rocks their silence break,—
The sound prolong.

Our fathers' God! to Thee,
Author of liberty,
To Thee we sing;
Long may our land be bright
With Freedom's holy light;
Protect us by Thy might,
Great God, our King.

"The Battle Hymn of the Republic"

The author of this inspiring song was Julia Ward Howe. During a visit to Washington in 1862 she was much impressed with the military appearance of the city. She awoke one night, and immediately the lines suggested themselves to her. She arose at once and with almost no hesitation wrote out the entire poem. The tune is that of "John Brown's Body."

Mine eyes have seen the glory of the coming of the Lord;
He is trampling out the vintage where the grapes of wrath are stored;
He hath loosed the fateful lightning of His terrible swift sword;
His truth is marching on.

CHORUS

Glory! glory! Hallelujah! Glory! glory! Hallelujah!
Glory! glory! Hallelujah! His truth is marching on.

I have seen Him in the watch-fires of a hundred circling camps;
They have builded Him an altar in the evening dews and damps;
I can read His righteous sentence by the dim and flaring lamps;
His day is marching on.

He has sounded forth the trumpet that shall never call retreat;
He is sifting out the hearts of men before His judgment seat;
Oh, be swift, my soul, to answer Him! be jubilant, my feet!
Our God is marching on.

I have read a fiery gospel, writ in burnished rows of steel;
"As ye deal with my contemners, so with you my grace shall deal;
Let the hero, born of woman, crush the serpent with his heel,
Since God is marching on."

In the beauty of the lilies, Christ was born across the sea,
With a glory in His bosom that transfigures you and me;
As He died to make men holy, let us die to make men free,
While God is marching on.

"The Star Spangled Banner"

No patriotic song thrills Americans as does "The Star Spangled Banner." The knowledge of how it came to be written makes it doubly inspiring. It came about in this way:

In the War of 1812, British warships attacked one of the defenses of Baltimore known as Fort McHenry. Francis Scott Key, a native of Maryland, was detained as a temporary prisoner on board the flag-ship of the English Admiral, while attempting to secure the release of a friend held as prisoner. All night Key watched the battle. Firing ceased before dawn, but he had no means of telling whether the British had taken the fort until the

sun rose; then, to his joy, he saw that "Old Glory" still floated in the breeze over the fort—which meant that the British had failed. Key, in his delight, used the back of a letter he had in his pocket on which to write the poem. It appeared a week later in a Baltimore paper under the title of "The Defense of Fort McHenry," but this was later changed to "The Star-Spangled Banner."

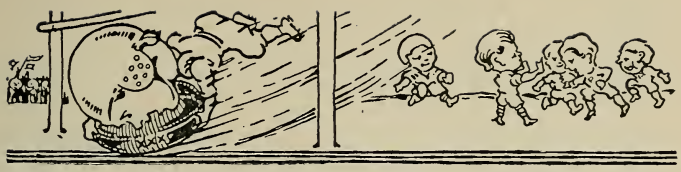
Though never formally adopted by Congress as a national anthem, it is given first place among our patriotic songs. Both the Army and Navy use it at the flag-lowering exercise at sunset. It is also used on all state occasions at home and abroad, in theaters, and public meetings of every kind. At such times all people rise and remain standing to the end as a tribute to their country's flag.

Oh say, can you see, by the dawn's early light,
What so proudly we hailed at the twilight's last gleaming?
Whose broad stripes and bright stars, through the perilous fight
O'er the ramparts we watched, were so gallantly streaming!
And the rockets' red glare, the bombs bursting in air,
Gave proof through the night that our flag was still there:
Oh say, does that star-spangled banner yet wave
O'er the land of the free and the home of the brave?

On the shore, dimly seen through the mists of the deep,
Where the foe's haughty host in dread silence reposes,
What is that which the breeze, o'er the towering steep,
As it fitfully blows, now conceals, now discloses?
Now it catches the gleam of the morning's first beam,
In full glory reflected, now shines on the stream:
'Tis the star-spangled banner! O, long may it wave
O'er the land of the free and the home of the brave!

And where is that band who so vauntingly swore
That the havoc of war and the battle's confusion
A home and a country should leave us no more?
Their blood has washed out their foul footsteps' pollution.
No refuge could save the hireling and slave
From the terror of flight, or the gloom of the grave:
And the star-spangled banner in triumph doth wave
O'er the land of the free and the home of the brave!

Oh! thus be it ever, when freemen shall stand
Between their loved homes and the war's desolation!
Blest with vic'try and peace, may the heaven-rescued band
Praise the Power that hath made and preserved us a nation.
Then conquer we must, for our cause it is just,
And this be our motto: "In God is our trust."
And the star-spangled banner in triumph shall wave
O'er the land of the free and the home of the brave!



CHAPTER XXI

GROUP AND MASS GAMES

Edited by GEO. O. DRAPER*
Training Secretary, Physical Bureau,
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SECTION 1. MASS GAMES
SECTION 2. RELAY RACES
SECTION 3. STUNTS

Play is the one thing for which the boy finds a continuous and insatiable appetite. He had rather play than eat, and any activity which interferes with his play is absolutely unpopular. Boys should rejoice in the fact that folks are beginning to recognize in play vital and necessary elements of growth—physical, mental, and social. What used to concern parents and be a source of continuous worry and annoyance is now recognized as not only very desirable but essential.

Is there a boy who does not enjoy matching his skill and endurance through play with that of his companion? The country boys gather behind the barn when the opportunity offers and play "Duck on the Rock," "Run, Sheep, Run," or some other old familiar game. The city boys, when getting together in their parks and streets, play "Tops," "Red Rover," or some other jolly

* *Acknowledgment.* This compilation of games has been carefully selected from material used and contributed by Y. M. C. A. Physical Directors, Army Recreational Directors, Public School, College, and Playground Directors, whose generous cooperation has made possible this collection.

The compiler acknowledges this indebtedness and expresses his appreciation to those contributors and to E. P. Brandon, who prepared the chapter on group games for the Canadian Manuals.

good game. It is an unfortunate boy indeed who does not have the opportunity to express himself through play. It is an abnormal boy who does not desire to play. There are many games, good and bad. Some are popular in some sections of the country, some in others. It is the object of this chapter on games to make available for all sections of the country good games of proven worth. All of these games have been tried and have proved worth while. They have given hours of pleasure to boys.

They require no special equipment. They are available to everybody under almost any kind of circumstances. They are so simple that they can be led by any novice, and they contain those elements of happiness necessary to successful play.

The tendency in the present age is toward specialization. This specialization has led our play life into the realms of professionalism, and denied play to the novice.

Another element accompanying play which flies the danger flag, and probably more than any other thing has prejudiced the minds of many people against it, is commercialism. Commercialism also fosters specialization, and the tendency towards it must be discouraged. People should play for the love they have for play and not for any remuneration, whether it be money, clothing, or costly prizes. Prizes tend to create specialization and to eliminate the less skilled. The backward boy, or the boy who is classed as non-athletic, can be taught to enjoy play by the use of these simple play games.

"Play develops sportsmanship, courage, self-control, ability for true and quick decisions, and many other qualities that stamp a boy as a trained, well-organized individual." The boy who can play the game fairly, keep his temper, and use judgment, is developing qualities fundamental to his life. One who loses his head (to use a slang expression) in the game, is at the mercy of his opponent as well as is the individual who loses his head in business.

The boy who plays fairly, even though his opponent be using unfair methods, wins admiration, develops self-control, self-confidence, and fairness—qualities which will immediately find a place for him in the world of affairs. Winning is incidental—character-building is of supreme importance.

I. MASS GAMES

A. CIRCLE GAMES

Lock Arm Tag (1)

Players are arranged in pairs in a circle. The players in each pair lock inside arms and place the outside arm on hips. There should be a distance of at least three feet between each pair. Two players are selected. One is "it" and chases the other. The player being chased can link arms with either man in any pair in the circle. This makes three men. The man who has an opposite arm is then subject to being tagged by "it." Players are allowed to run through or around the circle in either direction. A man upon being tagged can immediately tag back, but as soon as he has linked arms with any one of the players in any pair within the circle, he is not subject to being tagged.



Lock Arm Tag

Three Deep Tag (2)

Players are arranged in pairs as in the previous game with the exception that the pairs are arranged with one player standing in front of the other. The game proceeds as in No. 1, but instead of linking arms, the man being chased steps in front of one of the pairs of players which makes that group three deep. The back man in that group is the man then chased by "it."



Three Deep Tag

Broncho Tag (3)

Players are arranged the same as in three deep. The last man in the pair grasps the man standing in front of him about the waist and by twisting him about tries to prevent the man being chased from getting in front of him. The front man tries to catch and hold the man chased. If the man succeeds then the third man in the group is subject to being tagged as in three deep.

Swat Tag (4)

Equipment Needed: Knotted towel, stick, rope, sneaker, belt, or swatter. The players are arranged in a circle with their hands behind their backs and their heads bent forward with their eyes on the ground. A man is selected to be "it." He runs about the circle with a swatter in his hands. He places it in the hands of one of the men in the circle. This man turns upon the man who stands at his right in the circle and begins beating him with the swatter and continues beating him as he chases him about the circle to the right until he comes again to the point in the circle he left. The chaser then runs about and places the swatter in the hands of some other man and the game proceeds as before. Hitting on the head is prohibited.

Circle Jump (5)

Equipment Needed: Rope with weight at the end or a bamboo stick. One man takes his place in the center of the circle with the rope or stick in his hands. The men forming the circle join hands. The center man swings the rope or stick about the circle under the feet of the men, who are expected to jump over same as it passes beneath them. If any player in the ring steps on the stick or rope or stops its progress, he must take his place in center and relieve the man there.

Object Tag (6)

Equipment Needed: A ball or some other easily handled object. Players are arranged in a simple ring. A ball is placed in the hands of one of the men forming the ring. A man is selected to be "it." He takes his place in the ring and endeavors to tag the basket ball. The men in the ring, by passing it in either direction, try to keep the ball from being tagged. The men are not allowed to skip more than one man in passing the ball about the circle. The penalty for skipping is that the one passing last shall become "it." If "it" succeeds in tagging the ball the man who last passed same takes his place. The ball is always in play whether it be on the ground outside the circle or in the hands of the players.

Breaking Prison (7)

Players are arranged in a circle with hands joined. The prisoner takes his place in the center of the circle and tries to get out by

breaking the bars (clasped hands) or by going over or under these barriers. Should he escape all other players give chase. The one catching him becomes the prisoner. Prisoners are not allowed to rush more than two strides in attempting to break through the lines.

Mount Ball (8)

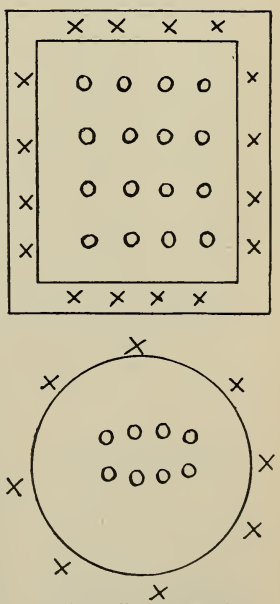
Equipment Needed: One ball or bean bag. No 2's mount astride the backs of No. 1's and are given the basket ball. The riders endeavor to pass the basket ball back and forth. The players being ridden (the Bronchos) endeavor by jumping and bucking to cause the riders to miss catching the ball. If the ball is dropped upon the ground, the Broncho of the player that dropped the ball picks it up and endeavors to hit the rider with it. (Caution—Bronchos should keep their positions in the ring. The riders are free to run anywhere to avoid being hit.) If he succeeds, then the riders become the Bronchos and the Bronchos are given the ball and the game proceeds as before. Heavy men should be paired together in this game.



Mount Ball

Dodge Ball (9)

Equipment Needed: One or more basket balls and a stop-watch. It is well for this game to have a lime circle marked upon the field. This should be large enough so as to allow all of the players to stand on same with plenty of room to throw the ball. Players of team one take a position on the outside of the line. Players of team two take their places inside of the circle. The object of the players on the outside of the ring is to hit with the ball the players within the ring without stepping into the circle. A player may step into the circle to recover the ball, but must either pass the ball or step outside of the circle before throwing it at an opponent. As soon as a player is hit he must drop outside of the ring. The man in the ring can move freely about, endeavoring to keep from being hit. After all the men in team one have been hit out of the circle the teams change, No. 2 taking the place inside, No. 1 outside. Record is taken of the length of time it required team two to hit team one out of the circle. If team one



Dodge Ball. 2 Formations

succeeds in hitting team two out in a shorter time, it is awarded the game. *Modification*—After a certain period of time the second basket ball can be put in play if desired. This speeds the game up considerably.

Circle Chase (10)

The group form a circle and are counted off in fours. The leader takes his place in the center of the circle. He calls any number from one to four and the men holding the number called by the leader step back and run around the outside of the circle to the right, endeavoring to tag the man who stands in the circle on his right. If he succeeds in tagging him he takes his place in the circle. The man tagged must go to the center of the circle. The one who eliminates the largest number of players wins the game.

Spinning the Hun (11)

Participants should not exceed 24. Players assume a sitting position (as close together as possible), with their feet toward the center of the circle. A player (the Hun) stands in the center of the circle. He makes himself as rigid as possible with his hands close to his sides. He falls into the hands of one of the men in the circle. This man passes him on to the next, who passes him on to the next, and so on. The man is spun around the circle. His feet are always on the ground, pivoting in the center. (It is well to select a light man to be spun.) If a man allows the Hun to fall he must take his place inside the circle.

Numbers Change (12)

The players stand in a large circle and are numbered consecutively. One player takes his place in the center. He calls two numbers and the players whose numbers are called must change places while the center player tries to secure one of their places. The player whose number is first called does not move until after the second number is called. The one who is left without a place replaces the center player.

Pull into Circle (13)

A small circle should be marked upon the ground. Players are arranged around the circle facing in with joined hands. At the signal to start the players endeavor to make their neighbors step inside of the circle with one or both feet. If successful that individual drops out. As soon as the circle of men becomes too small to fit around the outside of the ring marked on the ground the line is reformed and the game starts over.

Circle Stride Ball (14)



Circle Stride Ball

The boys all but one form a circle, standing in a stride position, with feet touching those of the next boy, making a barricade for the ball. The odd boy stands in the center and tries to throw the ball outside of the circle between the feet of the players. Those in the circle try to prevent the passage of the ball using only their hands for this. The play continues until the boy in the center succeeds in sending the ball through the circle, when he changes place with the boy between whose feet the ball passes. The players must not move their feet, but in returning the ball to the center boy, it may be thrown at different parts of the circle, taking other players off their guard, thus aiding the center player.

B. TAG GAMES

Chain Tag (15)

The base line is at one end of the field of play. One player is appointed to be "it." He endeavors to tag another player. The player when tagged joins hands with "it" and the two endeavor to tag other players. Every player tagged must join hands with the others in a line between "it" and the player first tagged by "it." These two players at the end of the line are the only ones who can tag other players. If any of the other players succeed in breaking the line by breaking the grasp of players in the line, the men who are not in the line have the privilege of chasing those who made up the line back across the base line, slapping them below the belt as they run. Behind the base line the chain is again formed and the game is continued.

Cross Tag (16)

A man is selected as "it." He starts chasing another man. He must continue chasing that man until he either tags him or some third party runs between him and the man he is chasing. Then "it" must chase the man who crossed the path.

Turtle Tag (17)

One, two, or three men can be selected as "it," depending upon the size of the group. Those who are "it" endeavor to tag others. In order to keep from being tagged players must lie upon their backs

on the ground with neither feet nor hands touching the ground. So long as they are in this position they cannot be tagged by "it."



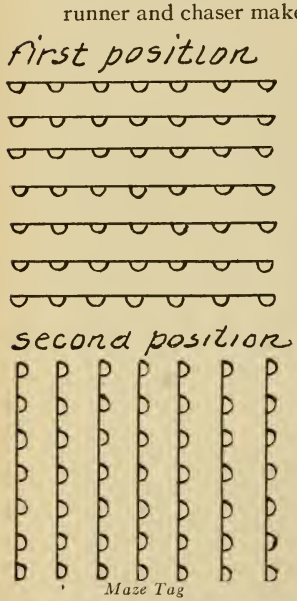
Ostrich Tag

Ostrich Tag (18)

In order to be safe the player must be standing on one foot with opposite arm under knee of same side, hand grasping nose. This may be made more vigorous by allowing the one who is "it" to take one push at any man in this position and if he breaks his position he is subject to being tagged until he again assumes the position.

Maze Tag (19)

All but two of the players stand in parallel lines or ranks, one behind the other, with ample space between each two players and each two ranks. All the players in each rank clasp hands in a long line. This will leave aisles between the ranks and through these a runner and chaser make their way.



Maze Tag

The sport of the game consists in sudden changes in the direction of the aisles, brought about by one player who is chosen as leader and stands aside, giving the commands, "Right face!" or "Left face!" at his discretion. When one of these commands is heard, all of the players standing in the ranks drop hands, face in the direction indicated and quickly clasp hands with the players who are then their neighbors on the right and left. This brings about a change of direction in the aisles and therefore necessitates a change of direction in the course of the two who are running.

The success of the game depends largely upon the judgment of the leader in giving the commands, "Right (or left) face!" They should be given quickly and repeatedly, the leader often choosing a moment when the pursuer seems just about to touch his victim, when the sudden obstruction put in his way by the change in the position of the ranks makes necessary a sudden change of direction on his part. The play continues until the chaser catches his victim, or until the time limit has expired. In either case two new players are then chosen from the ranks to take the places of the first runners.

It is a foul to break through the ranks or to tag across the clasped hands.

Number Tag (20)

Equipment Needed: An old soft playground ball or basket ball. A small circle (three feet in diameter) is marked in the center of the field of play. Each player is given a number. The game is started by one of the players dropping the ball in the circle and calling a number. The one whose number is called picks up the ball and commands, "Halt!" All players must stand fast upon hearing the command. He endeavors to hit a player with the ball. If he succeeds, the player hit picks up the ball, commands "Halt!" and attempts to hit some one else. The game continues in this way until some one misses. The player who misses hitting another has one point recorded against him and must take the ball to the circle and start the game again by calling a number. If a player has two misses checked against him, he is penalized. The penalty is for that player to run the gauntlet. All the other players line up in two columns, facing each other. The penalized player must run between these columns while the players forming the lines are given the opportunity to slap at him from behind as he runs by. The penalized player is given the ball and the game is continued.

Double Number Tag (21)

Equipment Needed: One basket ball or indoor baseball. Similar to number tag, with the exception that each number is assigned to two individuals. These individuals are known as partners. When a number is called either partner may pick up the ball and endeavor to hit others directly or else pass the ball to his partner, who may either hit a player or return the pass. If in making a pass the ball is not caught by the partner it counts the same as a miss. There is no limit to the number of times the partners may pass the ball between them. If any player is hit with the ball he may immediately endeavor to hit another player or pass to his partner. In this game only misses count against the player. Two misses result in a penalty. Both partners have to run the gauntlet to pay their penalty, whether it has been earned by an individual or collectively. The game is then renewed by one of the penalized partners dropping the ball in the circle and calling a new number.



Mount Tag

Mount Tag (22)

Similar to Turtle Tag, with the exception that a player can escape from being tagged by leaping upon the back of another player. Neither the man on the back nor the man who is carrying him are subject to being tagged.

C. TUGGING AND THROWING GAMES

Line Wrestling (23)

A line is marked upon the field. Teams draw up on each side of the line, facing each other. Object—to pull the opponent across the line. At the command to go the men try to pull opponents across the line. When both feet of a man cross the line he becomes a captive and is out of the game for that trial. The team which has succeeded in pulling over the most men at the end of two minutes wins. The best two out of three pulls, to determine the best team.

Hot Rice (24)

Equipment Needed: One baseball bat or club, one indoor baseball. A player takes the bat and ball in a position centrally located in the playing space. All other players spread out on the floor around the man with the bat. The man with the bat starts the game by batting the ball in any direction. Any player who can get the ball, immediately throws it at the man with the bat. The batter tries to bat the ball, thus protecting himself from being hit. If any part of his body is hit by the ball the man who last threw it is entitled to take the bat. If the batter should bat the ball and one of the other players should catch it, that player would also be entitled to bat. The man with the bat endeavors to prevent himself from being hit by placing as much distance between himself and the thrower as possible, either by running from the ball or hitting the ball from him. Upon being hit, however, he immediately drops the bat and the man who threw the ball becomes the batter. All may run about with the exception of the man with the ball. He must throw from the position where he picks it up.

Duck on Rock (25)

A flat rock is placed upon the ground 15 yards in front of a line. Each competitor is given a tin can, block of wood, or a small rock and in turn throws from behind the line endeavoring to have his missile land as near the flat rock as possible. The one whose missile is the greatest distance away from the flat rock is "it." He places his missile (which is called the "duck"), on the rock, and the other competitors endeavor to pick up their missiles and run back across the line without being tagged by "it." If tagged they become "it" and must place their missiles on the rock. As soon as the competitors have crossed the line they endeavor to knock the duck from the flat rock by throwing their missiles at it. If successful they are allowed free return passage to the line and the individual who was "it" must replace his duck on the rock before he can tag any of the competitors in their endeavor to race back to the line.

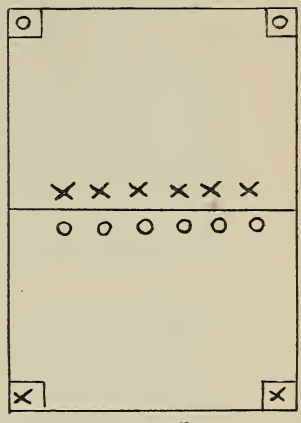
Corner Ball (26)

A space about thirty feet long and twenty feet wide is needed for the game. A line (1) divides this into two equal parts. At each corner is a base. Each party forms in a straight line about eight feet from the line. Two members of each party take positions in the bases on the other side. Number one of the first party then throws the ball over the heads of the second party, to one of his fellows on either of the bases. If he catches it, he throws it back. The opposing party tries to intercept the ball and, if successful, gains one point. The play then continues, the other side throwing the ball.

The rules of the game are:

1. The members of each party may move about freely in their space.
2. No member may cross the line.

("Mind *v.* Body," Vol. V.)



Corner Ball

Long Ball (27)

Equipment Needed: A playground ball and bat. Two parallel lines 60 feet apart should be made. One line is called "home" and the other "third base." The pitcher's box is half way between the two lines, or it may be placed 35 feet from each line (having two boxes). The player is put out either by being hit with the ball thrown by an opponent or by the regular rules of indoor baseball.

Guess Ball (28)

Equipment Needed: One basket ball. Teams line up behind a certain line. One person is "it" and stands about 25 feet in front of players, with his back to them. Some man throws the ball and tries to hit the fellow standing in front. If successful in hitting the one in front, the one in front tries to guess who hit him. If he guesses the right man, he takes the place of the one who hit him; if not, he takes another turn in being "it." But if the one who aims for the one in front misses, the thrower is "it" and must go out in front, and so on.

Hand Baseball (29)

Equipment Needed: One light rubber or tennis ball. The game is similar to regular baseball with the exception that instead of batting the ball with a bat, the open hand is used. One or three bases can be used according to the number of players playing. The fielders can put base runner or batter out as in regular baseball by hitting said batter or base runner when he is off or between bases.

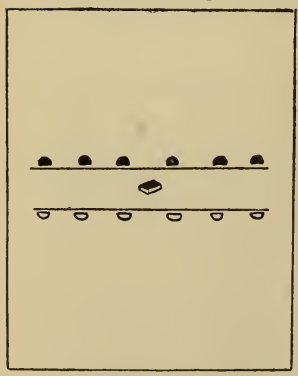
Horseback Wrestling (30)

In this game one-half of the men will be riders and the other half horses. The rider, when astride his horse, will use nothing but his legs as his support during maneuvers. His hands will at all times be kept free and will not touch the horse. It will be the object of the horse to balance his rider properly, so that at the word "Go" two riders can come to combat in a form of wrestling, with the object of dismounting one another. The winners are later assembled for competition among themselves. This game may also be reversed by having the riders become the horses as soon as one has been successful in dismounting the other. A bout is won and ended when any part of the opponent's horse or rider touches the ground, except, of course, the feet of the horse.

D. CHASING GAMES

Stealing Ammunition (31)

Equipment Needed: A number of short sticks, stones, or some such articles. The ground is divided into two equal parts with a small goal marked off at the rear end of each part in which these sticks are placed. Each player who reaches the enemy's goal safely may carry one stick to his own goal and may mot be caught while carrying it back. If caught in the enemy's territory before reaching the goal, the player must remain a prisoner in the goal until touched by one of his own side. Neither may he be caught while returning. Any player may catch any opponent except under the rule just stated. No ammunition may be taken by a side while any of its men are prisoners. The game is won by the side gaining all of the ammunition.



Black and White

Black and White (32)

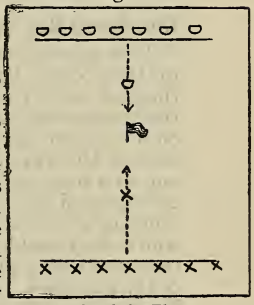
Equipment Needed: A pasteboard or wooden disk about 4" in diameter, white on one side and black on the other. Two base lines, parallel with each other and 50 feet apart, a center line parallel with the base lines and half way between, are marked on the field. Players on opposing teams line up back to back on each side of the center line with a space of 6 feet between the lines. One team is called "White," the other "Black." The disk is thrown into the air by the official. If the white side turns up, the "White" team chases the "Black" team across their base line. Every man tagged by the "White" team men, joins the "White" team. The two teams line up as before, the disk is again thrown and whichever side comes up, that team endeavors to tag its opponents

before they can run across their base line. The team having the largest number of players at the end of a game wins.

Marching Tag (33)

Two base lines 50 feet apart. The group is broken up into two units. These units form in company front behind their base lines, facing each other. Unit No. 1 marches forward in this formation and continues so to march until a whistle is blown. The whistle is the signal for Unit No. 1 to break ranks and run back to its base line before the men forming Unit No. 2 can tag its members. No. 2 men cannot leave their base line until the whistle is blown. Every man tagged before crossing his base line must line up with No. 2. Unit No. 2 then marches forward until a whistle is blown and is chased back behind its base line by Unit No. 1. The line having the largest number of players after an equal number of trials wins the game.

Steal the Flag (34)

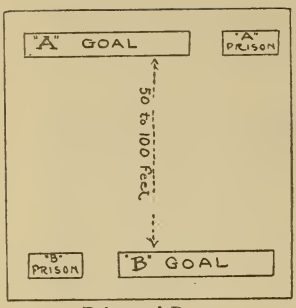


Steal the Flag

Equipment Needed: A small stick two feet long. (This may have a flag attached if desired.) Two base lines are drawn parallel and 50 feet apart. Players on opposing teams line up behind the two lines, facing each other. A captain is selected. Each team sends out one representative to the center of the field, where the small stick has been stuck into the ground in a vertical position. The object of each man who has been sent to the center is to grasp the stick and get away behind the base line before he can be tagged by the opponent. If he succeeds it counts one point for his team. If he is tagged by his opponent, it counts one for the opponents. Either man has the privilege of grasping the stick and attempting to return with it to his line. The stick is immediately stuck up in the center field and each captain selects another of his team to send forward to capture the stick the second time. The game is continued until each man has had equal opportunity to steal the stick.

Prisoners' Base (35)

Two lines are drawn parallel and 50 feet apart, known as base lines; a 5-foot square behind each line serves as prison. The teams line up one behind each line. One or more players from either team leave the base line and run toward the opponent. One or more members of the opposing team rush out and try to tag them before they return to their base lines. The last player to leave the base line may tag any opponent and is only subject to being tagged by an opponent who has left the base line later than he did. A player may run back across his own base line and immediately enter the field of activity again in an effort to tag an opponent before he can return to his own



Prisoners' Base

base line. As soon as a player is tagged by an opponent he is taken to prison behind the opponent's line. A captor is given free passage back with his prisoner to the base line. Prisoners stay within the prison until one of their team-mates succeeds in tagging them without previously being tagged by an opponent. When a prisoner is released from the prison free passage is given to the one who succeeded in releasing him. The team having the most prisoners at the end of a given time wins the game.

Run Sheep Run (36)

Two captains are chosen who in turn alternately choose players for their team. One team becomes a searching party and remains at the goal, while the other team goes out with its captain, who directs the various individuals where to hide, after agreeing with his party on a series of signals to be used, as described below. When all are hidden, this captain goes back to the searchers, who at once start out on a hunt under the direction of their captain, who may divide or dispose of his party as he sees fit. The captain of the hiding party remains with the searchers, calling out signals to his hidden men which shall enable them to approach nearer to the goal by dodging from one hiding place to another, always trying to keep out of sight of the searchers. Neither party, however, may run to the goal until his own captain shouts, "Run, Sheep, Run." The captain of the hiding party is generally the first one to give this signal and he does so whenever he thinks his men are well placed to make the goal. The captain of the searchers naturally gives the signal to his men as soon as he hears his competitors give it, as the game is won by the party of which one player first reaches the goal. Should any member of the searching party catch sight of an opposing player before all run to the goal, he tells his captain, who at once shouts, "Run, Sheep, Run." Any signals may be agreed upon between the captain of the hiding party and his men. The following are examples: One whistle, meaning "Keep low"; two whistles, "Push to the left"; three whistles, "Danger"; four whistles, "Push to the right"; five whistles, "Push toward the goal."

Hip (37)

Equipment Needed: One stick about two feet long. All the players stand in an informal group. One of them is provided with the stick, which he throws as far as he can, at the same time calling the name or number of one of the other players. The one who threw the stick,

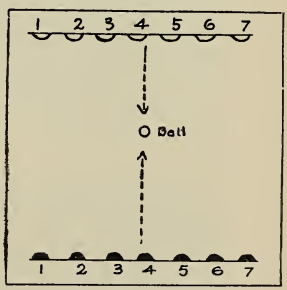
and all the others except the one whose name is called, scatter. The one who is called must pick up the stick, whereupon he becomes "Hip" and must chase the other players. Any player whom he catches he touches with the stick (pounding not allowed), and that player at once joins him in trying to catch the others. Anyone caught by the second player, however, must be held by him until "Hip" can come and touch the prisoner with the stick. The one touched with the stick, thereupon joins "Hip's" party and tries to catch and hold other players until touched by the stick of "Hip."

Fox and Geese (38)

One player is chosen to be fox and another to be gander. The remaining players all stand in single file behind the gander, each with his hands on the shoulders of the one next in front. The gander tries to protect his flock of geese from being caught by the fox, and to do this spreads out his arms and dodges around in any way he sees fit to circumvent the efforts of the fox. Only the last goose in the line may be tagged by the fox, or should the line be very long, the last five or ten players may be tagged as decided beforehand. It will be seen that the geese may all cooperate with the gander by doubling and redoubling their line to prevent the fox from tagging the last goose. Should the fox tag the last goose (or one of the last five or ten, if that be permissible), that goose becomes fox and the fox becomes gander.

Snatch Ball (39)

Equipment Needed: A stone, ball, or handkerchief. Any number of players can participate. Form two lines facing each other, the lines being about eight paces apart. The players number off on each side from one to the number of men in line. The object is mid-way between lines. The leader calls a number, both men run for the object and one, either by speed or strategy, snatches the object and returns to his own side, without being tagged by the same numbered player from the other side, thereby scoring one point for his side. Should the other man touch him the other side would score the point. Game to continue any number of points. To make the game more complex, call two or more numbers. This makes it harder to snatch the ball.

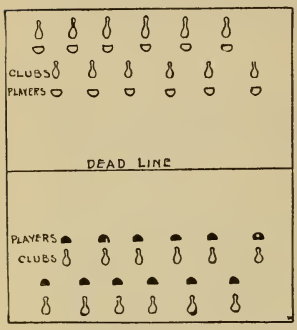


Snatch Ball

Fox in the Hole, Safety First Hop (40)

Any number of players may participate. Area for the game should be restricted, not too large; a four-foot circle should be made for a base. The leader chooses one player for Fox or Hopper. While this player is on the base he may stand on two feet, but when

he leaves the base to catch another player he must hop on one foot. Should he put the other foot down, he must return to the base and every player can slap him on the back until he does, but no player may block his path to the base. Should a player become tagged he becomes the Fox, and the other players may slap him on the back until he is safe on the base.



Bombardment

Bombardment (41)

The ground is divided into two equal fields by a line drawn across the center. At the rear of each section an Indian club for each player is placed, the player standing in front of the club, as per diagram. The object of the game is to knock down the opponents' clubs, each player, therefore, serving as guard to protect his club and as a thrower. He may throw whenever he can secure a ball. The balls are placed at the beginning of the game in the center of the field. None of the players of either team are allowed to pass over this center line. The score is taken at a given time, the side knocking down the largest number of pins winning.

This game may also be played by using a straight elimination play, that is, as soon as a player's club is knocked down, he picks it up, and leaves the floor, the game proceeding until either one of the teams is eliminated.

Another variation is to have each player go over to the opposite side when his club is knocked down until one side gets all of the opponents' players.

Treasure Hunt (42)

This game is a very adaptable one and can be run in a great number of different ways. It can be as simple or as complex as any leader may desire.

A mysterious letter may be read to the group or a letter in code posted where the group can see it. The contents of this letter will direct any one to a place where they will find detailed information as to the exact location of a buried treasure. By following instructions, working out the code, a boy will discover a second letter in hiding. A time limit may be allowed to find letter No. 3. At the end of that time the information contained in the second letter may be given to the entire group, so that they may hunt for letter No. 3. This method keeps everybody in the game.

As many letters may be hidden as desired, using the treasure as the last.

As stated before, this game is adaptable and can be made to teach observation, trailing, and tracking. Letters using identification of

trees, flowers, moss on trees, birds' nests, and so forth, may be used. Map and chart reading make the game more difficult. Letters may be written in Morse and Continental codes or easy codes may be made up.

"Eats," a good book on trees, flowers, a small axe, or any useful article may be the hidden treasure.

E. QUIET SOCIAL GAMES

Mingling Games

Games which can be used at the beginning of a social evening for the purpose of causing the group to mingle.

Capitals (1)

Half of the group will have pinned on them the outlines of different states without the names. The other half are given on slips of paper names of capital cities of states. The latter group are supposed to locate partners by finding the state to which they hold the capital.

Around the World (2)

Each player is given a card and a pencil. Various articles are scattered throughout the room, representing different countries, states, or cities—for example: A wooden shoe for Holland, a picture of a bull for Spain, a package of tea for China, a bear for Russia. Each article is numbered. The players circulate about the room endeavoring to guess what each article represents. He writes his guess with the number of the article, on his card.

Alphabetical Answers (3)

Cards having different letters of the alphabet are made. Each player has one of these cards pinned upon his person. It is well to eliminate the letters "v, x, and z" in this game. One player asks another a question and that player must answer having his first word commence with the letter pinned upon him. He must complete his answer before the questioner can count ten. If unsuccessful he must surrender his letter to the counter. The player having the largest number of letters at the end wins the game. Two players cannot question the same individual at the same time. The one questioned cannot use the same answer twice.

Who Am I? (4)

Each player has pinned upon his back the name of some prominent personage. In conversing with each other the conversation is carried on as though it were addressed to the personage whose name is

pinned on the back of the individual. It is the object of each individual to guess the personage he represents.

Trick Games

Mirror Pictures (1)

It is necessary for the one who plays this trick game to have an accomplice. The one who is to illustrate the game goes out of the room. His accomplice explains that he can picture the face of one of the individuals in the room upon the mirror, so that the person who has been sent from the room on his return can guess whose picture was taken. The accomplice then calls to the center of the room one of the group and has him look for a few seconds into the mirror. After the picture is taken in this way, the one who has been sent from the room is called back and to the amazement of the group he names the player whose picture is supposed to be photographed in the mirror.

The Trick

The accomplice who takes the picture sits in the seat of the one whose picture was taken, hence it is necessary for the one who leaves the room to observe the positions of the various players before going out.

Magic Writing (2)

An accomplice is required in this game. The one who is to illustrate the game leaves the room. The accomplice asks the others remaining in the room to select some word. Suppose the word selected be "hours." The one sent from the room is then called in. The accomplice has a short stick in his hand and by a series of mystic flourishes and knocks interprets the word to the player who left the room. He, to the astonishment of all, guesses the exact word decided upon.

The Trick

The vowel "a" is represented by 1 knock; "e" is represented by 2 knocks; "i" is represented by 3 knocks; "o" is represented by 4 knocks; "u" is represented by 5 knocks. The consonant "h" is interpreted by the conversation. For example, the accomplice in interpreting the "h" in "hours" to the one returning to the room did it in this way. Flourishing the stick in the air he says "Having a hard time, are you not?" The guesser knows by that the first letter is "h." The accomplice then taps four times with a stick indicating "o," then after a few more flourishes taps five times representing "u," then says to the players, "Remember the word you have chosen," which gives the letter "r" to the guesser. The accomplice then says,

"Seems as though you should have it by now," and the one who left the room knows that the word "hours" was the one selected and so states.

Watch Trick (3)

An accomplice is required for this game. The one who is to illustrate the game leaves the room. The players remaining in the room then determine upon some object which shall be hidden. This object is unknown to the one who leaves the room. After it is properly hidden the lights are turned out to make the trick seem the more difficult. The players are cautioned that they must keep absolutely quiet during the game. The guesser is called into the room and with little difficulty goes to the object and discovers it to the other players.

The Trick

The accomplice places a watch beside the hidden object and the one who leaves the room locates the hidden article by the tick of the watch.

Guessing Games

Verbal Authors (1)

A judge is selected who takes his place in the center of the group. Each player in turn has to stand up and name the title of a book. The others are to guess the author. The one first naming the author scores one point. The next individual then stands up and gives another title. The game continues. The individual naming the most authors scores the highest number of points.

Another way to play the same game is to give each player a card and a pencil and have him write thereon as many of the authors as he knows.

Words (2)

The players are arranged as in a spelling match. Sides may be chosen if desired. The first one in the line starts by giving a letter. The next one in line adds a letter to it. Suppose the first letter given to be "m." The second player thinking of "money" says "o." The third player thinking of "mobilize" says "b," but as m-o-b is a complete word the third player must take his place at the end of the line for completing the word, as no word is supposed to be completed until the turn of the last player.

Gossip (3)

A player is sent out of the room. A judge is selected who asks each player left in the room to make some statement about the individual who has been sent out of the room and writes down the

statement and the name of the individual making it. Example of statements: "His chin is too long." "He has his mother's eyes." "He is a poor hunter." When the leader has selected all of these statements the individual is called back into the room. The leader then reads off the various statements made and it is up to the one who left the room to guess who it was that made the statements about him. If he guesses correctly that individual is sent out of the room and the game continues.

Telegrams (4)

Each player is given a telegram blank and pencil. Upon this he places ten letters about one and one-half inches apart. He cannot use the same letter twice. All of the blanks are then passed to the right and each player writes a telegram, using words starting with the various letters he finds upon this blank. The telegrams are then read aloud.

Shouting Proverbs (5)

A player is sent from the room. Those remaining think of some proverb. Each player is given a word of the proverb. When the player is called back into the room they all shout at the same time the word of the proverb which has been given them. It is up to the guesser to tell the proverb.

Find the Ring (6)

Equipment Needed: A long piece of string with a small ring on it, the string being tied. The players sit in a circle, holding in their hands a long piece of string tied at the ends so as to form a circle large enough to go around, a small ring having been put upon this string. One player is chosen to stand in the center. The players who are seated then pass the ring from one to another, the object being for the player in the center to detect who has the ring. The other players will try to deceive him by making passes to indicate the passage of the ring when it really is not in their vicinity. When the player in the center thinks he knows who has the ring, he calls out the name of the player. If right, he sits down, and that player must take his place in the center.

Animal Blind Man's Buff (7)

A player is blindfolded and placed in the center of the group. After having been turned about several times to confuse his location, he is handed a short stick. He endeavors to touch an individual with the stick. (The players are not allowed to move about to avoid being touched by the stick.) Upon touching an individual he gives

the name of an animal and the player touched must try to imitate the noise that animal makes. Upon hearing the noise, the one blindfolded endeavors to recognize who it is that makes it. If successful, that individual takes his place.

Team Games

Clothespins (1)

Equipment needed: Three dozen clothes pins. The players are divided into two teams and arranged in two lines facing each other, seated. A dozen and a half clothespins are handed to the two players facing each other at one end of the lines. The pins must be held in the grasp of the two hands. At the signal to start, the player holding the bundle of pins passes the bundle to the next player in the line. The object of the game is to pass the bundle of clothespins from hand to hand to the other end of the line and return. If any of the pins are spilled, the individual dropping the same must recover them for his bundle before passing them on to the next. The team that first succeeds in passing the bundle of pins to the end of the line and back wins.

Cross Questions (2)

All but one of the players sit in two rows facing each other, those directly opposite each other being partners. The odd player walks around the rows behind the others, asking questions of any player facing him from the farther row. The question must be answered, not by the player addressed, but by his partner or vis-a-vis, who sits with back to the questioner. Any player answering a question addressed driectly to him, or failing to answer one addressed to his partner, or giving an incorrect answer to a question, changes places with the questioner, or pays a forfeit, as may have been decided on beforehand.

Jenkins Up (3)

Divide the company into two sides. One division sits around the table on one side, the other on the opposite side. The members of division "A" put their hands under the table and a small coin, dime or quarter, is passed from one to the other.

When division "B" thinks they have had enough time, the players call out, "Jenkins up!" and the players of "A" hold up their closed hands, and when "Jenkins down!" is called, they must place their hands, palm down, on the table. The players of "B" must guess under which palm the coin is. Each player has one guess, those on the opposite side raising their hands when requested to do so.

If "B" guesses correctly, the coin is passed over to them and "A" must guess who has it, but if not, "A" keeps the coin, and "B" has

another trial for guessing. Tally may be kept, 1 being counted for every correct guess, and a certain number, as 50, may be the limit. The side gaining 50 points first is victorious.

Fire (4)

Choose two leaders from among the players. Each leader chooses his side. The sides sit opposite each other, and the leader of one throws a ball to any one on the opposite side. As he does he says either, "Earth," "Air," "Water," or "Fire," and counts ten.

The person who caught the ball must answer before he finishes counting ten. If "earth" was called, he must name some quadruped found therein; if "water," some fish must be named; if "air," the name of some bird; but if "fire" was called he must remain perfectly still.

If the players give a wrong answer or speak when they should be silent they are out, and the leader must throw the ball to some one else, but if the players answer correctly, it is their turn to throw the ball to someone on the opposite side, and the game goes on as before.

The side whose players stand up the longest, wins the game.

Location (5)

The group is diyided into two teams. A leader is selected for each group. A player on team 1 calls the name of a town or place and counts ten. While he is counting the opposite opponent must give the location of the town or place. If he has not succeeded before the counter has reached "ten," he drops out. The second player on team 2 then names a place and it is up to the second player on team 1 to give the location. When all the players have had a chance the team having the largest number of players remaining, wins.

II. RELAY RACES

For line relays the teams are arranged in columns of file with the columns running parallel to each other and at least ten feet apart. This is the simplest formation in which the players can be grouped. A fixed line of lime, tennis tape, or sunken wooden take-off boards should be so placed on the field that competing teams have equal advantage. This line shall be known as the starting line and the front man in each column shall toe this line. Another line which shall serve as the distance line shall be placed thirty feet in front of and parallel to the starting line.

When large numbers of teams are competing it is well to have the man who finishes the relay wear some distinguishing mark to aid the judges.

A. PASSING RELAYS

(*Note.* A shoe, stone, bean bag, ball, or some other object can be used in the following events.)

Straddle Relay (1)

Players stand in the stride-stand position with the object to be passed on the line in front of the first contestant. At the start the object is passed between the legs of the contestants in the column until it reaches the back of the column. There it is picked up by the end man who carries it forward on the left side of his column to the distance line which he must touch. He then returns to the front of his column where he faces about and passes the object back between his own legs toward the back of the column where it is picked up by the end man who repeats the performance of the preceding end man. When every man has carried the ball forward the last man finishes the race when he crosses the distance line.



Straddle Relay

Over the Top (2)

Players stand at attention with the object to be passed on the line in front of the column. At the start signal the object is passed back over the head by the first player to the second and so on until it reaches the last player. (Every player in the column must grasp and pass the object.) The end player carries the object forward over the backs of the players in the column in front of him who assume a stooping position. As soon as he reaches the front of the line he runs to the distance line after touching which he returns to the front of his column and starts the object back over his head. When every player has carried the object forward the last player finishes the race when he rushes forward across the distance line.

Over and Under (3)

Like No. 2 excepting that every other player must pass the object between the legs.

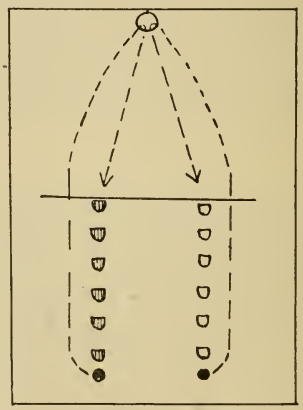
In and Out (4)

Players stand in the stride-stand position, with the object on the line in front of the first contestant. At the start signal the object is rolled back between the legs of the players in the column until it reaches the back of the column where it is picked up by the end player who runs forward to the right of the player in front of him, to the left of the second, to the right of the third, etc., until he has

reached the front line whereupon he runs to the distance line which he touches. Returning to the front of the column he starts the object back between his legs. When every player has carried the object forward the last player finishes the race when he crosses the distance line.

Basket Ball Relay (5)

Equipment Needed: One basket ball for each team competing and one basket ball basket for every six teams competing. The ball is placed on the starting line in front of the column. Players assume a stride-stand position. At the signal to go the ball is passed back between the legs of the men in the column until it reaches the last man in the



Basket Ball Relay
(*See also cut on page 373*)

column, who rushes forward and shoots the ball into the basket which should be located about fifteen yards in front of the column. As the men from the other columns will be endeavoring to shoot from their places through the basket at the same time, this makes a very spirited game. A man can shoot for his basket from any position on the floor, but must shoot until the ball passes into the basket. Players are not allowed to interfere with each other in shooting the basket. After the goal has been properly made, the men return to the front of their columns and each starts the ball back between his legs and the game continues until every man has shot the required basket.

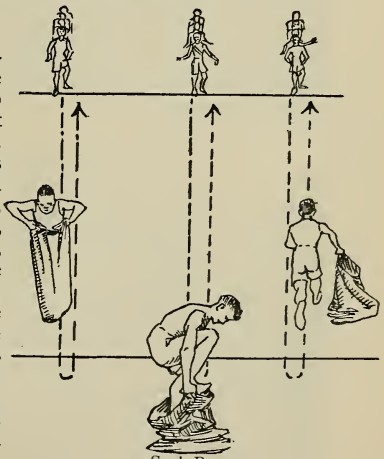
B. EQUIPMENT RACES

Potato Race (6)

Equipment Needed: One potato and a block of wood or a stone for each competitor. A circle 18 inches in diameter is placed three feet in front of the starting line in front of each column. Another circle of the same size is placed about 15 yards in front of the first circle. As many potatoes are placed in the circle nearest the start line as there are competitors in the line. (*Note.* A basket can be used in place of these two circles, if available.) At the signal to start, the first player in each column runs forward, picks up a potato from the nearest circle, carries it to and drops it into the far circle. (*Note.* The potato must be within the circle, not touching the line.) After properly placing the potato in the far circle, the player returns, tags off the front player in the column, and takes his place at the rear of the column. The man tagged off repeats the performance, carrying off the second potato, etc. The race ends when the last player, after carrying his potato to the far circle, returns across the line.

Sack Race (7)

Equipment Needed: One good-sized crocker sack for each line. The front player in the column gets into the crocker sack. The crocker sack must be held well up under the arms. At the signal to go the player jumps forward to the distance line, beyond which he takes off the crocker sack, runs back to the front of the column, hands the sack to the second player, who gets into same. He must have pulled the crocker sack well up under the arms before he crosses the starting line. He then repeats the performance of the first. Players returning from the distance line take their places at the rear of the column. The race is won when the last player on the team crosses the finish line.



Sack Race

Stab-the-Spud Race (8)

Equipment Needed: One potato and one pointed stick, two feet long, for each competitor. A circle 18 inches in diameter is placed in front of each column. Another circle of the same size is placed about 15 yards in front of the first circle. As many potatoes are placed in the circle farthest away from the starting line as there are players in the line. The first player in each line is given a pointed stick. At the signal to go, he runs forward to the far circle, sticks his pointed stick

into one of the potatoes and runs back with it to the near circle. He is allowed to interfere with other competitors in attempting to make them lose their potato from their stick, so long as his potato is on his stick. His potato must be deposited within the circle nearest the front of his column before he hands his stick to the next player in the column, who runs and gets a second potato. After handing the stick to the front player in the column, competitors take their place at the rear of the line. The race ends when the last player, having properly deposited his potato within the circle, and having made sure that every other potato is within the circle, crosses the finish line.

Overcoat Relay Race (9)

Equipment Needed: Overcoat and gloves for each team. Have half of the players from each team in a column of file, opposite 40 yards from scratch, the leading players at scratch to be equipped with overcoat and gloves. At start the leading player runs to the leading player of his team opposite and transfers overcoat and gloves to him. This player returns to scratch, wearing overcoat and gloves and transfers to second player at scratch, and so on until last player of team has returned to scratch, wearing overcoat and gloves. Each player of team to run once only. Overcoat and gloves cannot be taken off until finish line is crossed. The player receiving same can put them on while running.

C. NOVELTY RELAY RACES

Monkey and Crab Race (10)

Players are arranged in parallel columns of file. At the signal to start the first player in the column places his hands on the ground and walks monkey fashion to the distance line. On reaching same he assumes a running position and returns to the front of the column where he touches off the second player, he himself going to the back end of the column. The second player gets down with his hands and feet on the ground, facing upward, and continues across the distance line in this position. He returns, tags No. 3, and takes his place behind No. 1 at the rear of the column. No. 3 walks monkey fashion. The rest of the column continues alternating, one man walking facing down and the other facing up with hands and feet on the ground until the last player, returning from the distance line, crosses the starting line.

Leap Frog Race (11)

Players stand in columns of file with a distance of four feet between individuals. At the signal to start all the players in the column, excepting the last player, assume a stooping position. The last player will take frog leaps over the backs of the players in the column followed by the next to the last player, etc. As soon as the

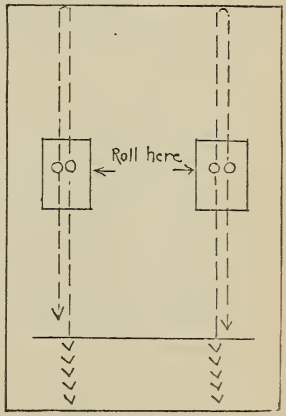
last player reaches the front of the column, he assumes a stooping position, likewise the player who followed him. When the player who headed the column has leaped over the backs of the players making up the column, he rushes forward across the distance line ending the race.

Hop Race (12)

The front player in the column hops on his right foot to the distance line, returning on his left foot. He tags off the next player on his team and takes his place on the end of the line. The race finishes when the last player returns from the distance line and crosses the starting line.

Forward Roll Relay (13)

Place a mat in center of floor in front of each team. Players run to mat, forward roll on mat, run to the end of the room; returning make another forward roll and run back to team, touching off No. 2 who does the same. If a team can do a backward roll use it for variety, or alternate.



Forward Roll Relay

Frog Race (14)

Similar to the hop race with the exception that the competitors travel in frog leaps rather than by hops. (*Note.* The frog leap is executed in this fashion. The player places both hands upon the ground supporting his weight thereupon as he jumps both feet forward, feet outside of hands. He then moves both hands forward simultaneously followed by both feet.) He travels the entire distance to the distance line, upon reaching which he assumes a standing position and runs back, tagging off the second competitor.

Skin the Snake (15)

Participants again assume the column of file position. Each reaches back between his legs with his right hand and grasps the left hand of the team-mate behind him. Upon the signal to start, the back player in the column lies down, keeping his feet together, and maintaining his grip on team-mate's hand. The column walks backwards over him. The next to the last player lies down beyond the last, etc., until the entire column is stretched on the ground. The player who was in the front of the column will be the last player to lie down. He gets up immediately and, running forward, straddling

the line, pulls the line with him. The line which gets to its feet the quickest without having broken, wins the race.

Slap Obstacle (16)

Players are arranged in parallel lines. Four players are selected from each column and are placed in front of and in line with the column with a distance of five yards between them. The first player in front of the column stands at attention; the second player takes a stooping position, as for leapfrog; the third player



Skin the Snake

takes a stride-stand position; the fourth player stands at attention. At the signal to start the player in front of the column runs forward, circling number one, leaping over number two, crawling between the straddle legs of number three, circling number four. After which he runs to the rear of the column, where he slaps the back of the last player; the last player slaps the back of the player in front of him and the slap is passed to the front player in the line who rushes forward upon receiving his slap and repeats the performance of the first runner. The game is finished when the last player in the column, after clearing all obstacles, crosses the starting line.

Rule. Runners are not allowed to grasp the man as they run around him.

Dead Man Relay (17)

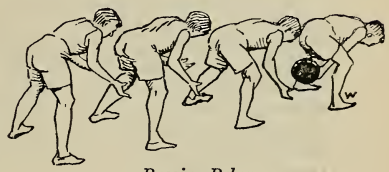
The front player in the column is instructed to go half way to the distance line and lie upon his back upon the ground with his head towards his team. At the signal to go, the second player in the column runs to the player lying upon the ground and lifts him by the shoulders to a standing position. (The player lying upon the ground should keep perfectly rigid.) The player lifted, then runs to the finish line. From there, he returns to the rear of his line. In the meantime the player who lifted him from the ground, lies upon his back in the same position as the player lifted. He who has gone to the rear slaps the player in front of him, and the slap is passed on until it reaches the player in the front of the column. He runs forward, lifts the dead man, and takes his place. The player runs to the finish line, and returning to the rear of the column, starts the

slap forward. The game ends when the last player in the line is lifted from the dead man's position, crosses the distance line and returns across the start line.

Attention (18)

Players stand at attention and are numbered off from the front of each column. The leader calls a certain number. The player of that number in each column runs forward on the right hand side, circling his column. Upon reaching the opening made by himself in the column, he steps in, assuming the attitude of attention. One point is awarded to the team whose runner first assumes the proper attitude in the column. Another number is called and the game continues.

Pass the Buck (19)



Passing Relay
(*See page 368*)

The players are in formation of two or more files, standing at stride-stand position with forward body bend and hands upon hips. Upon the starting signal the back man comes to the position of attention—with a snap—at the same time striking hard with the open palms of both hands the seat of the player in front of him, who in turn "Passes the Buck" on down the file. When the file leader receives the "Buck" he immediately gives the command, "About face!" The file about faces and jumps to a stride-stand forward trunk bend and the "Buck" is then passed up the file harder and faster than it went down. This is a relay race and the file getting the "Buck" back to its file-closer first wins. It is advisable to repeat the relay, *i. e.*, have the "Buck" passed down and up the file twice.

Spin Around Relay (20)

A player is sent forward from each line to a position ten yards in front of and in line with his column. He shall be known as the pivot. At the signal to start the player at the head of the column runs to the pivot, links his right arm in the right arm of the pivot and swings around him, and then returns to the rear of the line, links the arm of the man at the rear and pivots around him. He then runs and tags off the man at the front of the column and takes his place at the rear. The man tagged off repeats the performance of the first man who ran.

Jump Stick Relay (21)

Equipment Needed: One stick at least three feet long for each team. The stick is held in the hand of the first player in the column. Upon

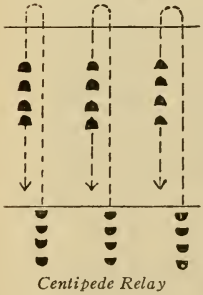
the signal to start he runs to the distance line, touching the line or the ground beyond with the stick. He then returns to the front of the column and hands the other end of the stick to No. 2. Then holding the stick between them and near the ground, they run to the rear of the column on each side. The players in the column leap over the stick as it reaches their feet. Upon coming to the rear end of the column No. 2 takes stick and runs to the distance line, which he touches. He returns to the front of the column, hands the other end of the stick to No. 3 and the game continues until the last player in the column carries the stick across the distance line.

Flag Race (22)

In this race the players face to the left. A flag is stuck in the ground on the starting line. At the signal to start the contestant nearest the flag picks it up, hands it to his next neighbor. In this way it is passed to the end of the line. The end player takes the flag and runs in front of his line to the distance line. Returning to the right of his column, he starts passing the flag along. The player who is then last in line repeats the performance and so on until every player has run. The last player finishes the race when he crosses the distance line.

Rescue Race (23)

Players stand at attention. At the signal to start No. 2 in the column leaps upon the back of No. 1, who carries him across the distance line in piggy-back position. There he drops him. No. 1 remains behind the distance line. No. 2 rushes back and picks up No. 3 in the column and carries him beyond the distance line and No. 2 remains there. No. 3 rushes back and picks up No. 4, etc., etc. When the last player in the column has been carried across the distance line the race is finished.



Centipede Relay

Centipede Relay (24)

The first four players in the column straddle a broomstick. It is required that the first three players grasp the broomstick with both hands in front of them. The last player of the four must grasp the broomstick with both hands behind him. In this position they run across the distance line and return. Behind the finish line they give the broomstick to the next four players on their team, and take their place at the rear of the line, while the second four repeat the performance of the first. The race ends when the last group of four crosses the start line.

Paul Revere Race (25)

Players are arranged in column of file "open order" with a distance of ten to twenty feet between the contestants. A light player is selected from each team to act as rider. He starts just back of the last man in the column. Upon the given signal he leaps upon the back of the last man who carries him to the man next in front of him in line. The rider must change from the back of the first steed on to the back of the second without touching the ground. The second steed carries him to the third and he is passed on from steed to steed until he reaches the front man in the column, who carries him across the distance line, ending the race.

Chariot Race (26)

Each line is grouped in pairs. At the signal to start the first pair with arms locked run across the distance line, returning across the start line, running to the rear end of the column. They slap the last pair. That pair passes the slap on to the pair next in front of them, etc. As soon as the slap reaches the pair at the head of the column, they start. The race ends when the last pair returns across the finish line.

Three-Legged Race (27)

No equipment needed other than the belts of the competing players. The competitors on the team are grouped in pairs. Team-mates stand opposite each other and have their inside legs strapped together just above the ankle with one belt and above the knee with the other. Their inside arms are placed around the back of their team-mate. The race is run in this fashion. When the first pair returns from the distance line they tag off the second and the second tag off the third, etc.

III. STUNTS

STUNT ATHLETIC MEET

One Hundred Yard Dash (1)

As many pieces of string are tacked to the wall, four feet, eight inches above the ground and about two feet apart, at one end of the stage or room, as there are competitors. The string to be twelve feet long. The contestants take the end of the string in their mouths and line up facing the point where their string is tacked. At the word, "GO," without the use of hands, they gather the string into their mouths until all the string has been taken into the mouth and the end attached to the wall is reached. The string must be kept taut at all times.

16-Pound Shot Put (2)

An inflated paper bag is put for distance, as though it were a shot, from the shoulder.

Potato Race (3)

A potato or some similar object is placed at the starting line. The race consists of pushing same with the nose to a certain point and back across the starting line.

Newspaper Race (4)

Contestants line up upon a starting line with a newspaper folded in quarter size under each foot. Each at the signal to start, lifts up one foot, and balancing on the other without touching the floor slides the paper forward with his hand. He then brings one foot down upon it, claps his hands above his head and lifts the other from its paper, which he moves forward with his hand. The foot supporting the body must rest upon the paper and the hands must be clapped above the head between each step. The race continues for a distance of about 25 yards.

Driving Contest (5)

Equipment Needed: Hammer and ten nails to each man. Plank 4 x 4, 6 or 8 feet long. Two or three men strive to see who can drive his nails first. Each man drives his nails into the same plank at the same time. This is very difficult, as the blows are not struck at the same time and the plank will be very unsteady, and one is liable to wallop his fingers. At any rate, he will miss many strokes.

Blindfolded Race (6)

Contestants are blindfolded and after being spun about several times, start on the race which is to the other end of the room and back.

Soaped Pole Climb (7)

Climbing a greased or soaped pole for prizes at the top.

Bottle Balance (8)

Contestant sits with his legs extended upon a large bottle or jug, lying upon its side. The right heel is placed on top of the left toe. A box of safety matches and a candle are handed each contestant, who endeavors to maintain his balance and light the candle.

Shoe Race (9)

Shoes of contestants are thrown into a barrel. The contestants draw up behind a given line. At a signal they rush to the barrel and endeavor to find their own shoes. They are allowed to throw any shoes not their own as they will. As soon as they find their own

they must report back with the shoes properly on to the judge. The one first doing so wins.

Sack Chase (10)

Equipment Needed: Two sacks. The players get into the sacks, which are tied under their arms, and take positions in opposite corners of the ring. Then lie on the floor on their back and wait for the command, "GO." Upon receiving the command, they jump to their feet and run around the ring, to the right, and keep going until one man overtakes the other. *Note.* This is the old sack race confined to a boxing ring.

Peanut Relay (11)

Equipment Needed: A flat stick like a shingle or a spoon and a peanut for each competing team. Competitors must race across finish line and back, balancing the peanut on the stick or spoon. The stick and peanut are transferred to the next man in the column behind the starting line and the race continues.

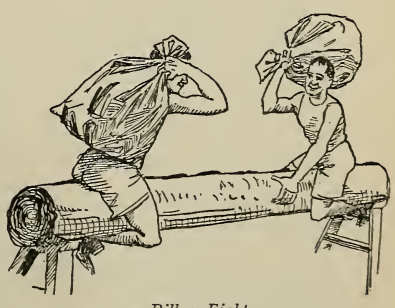
Bat Kicking Stunt (12)

Equipment Needed: Slippery floor, baseball bat. The player, toeing a certain mark, holds the bat in his left hand, placing the end on the floor close to his left instep.

The object of the game is to kick the bat for distance, marking distance on the floor. The bat must be kicked by the right toe from in back, the right foot swinging past the left heel on the outside. If the contestant is standing on a slippery floor, watch for a fall. as the player will kick his left foot from under him.

Pillow Fight on Pole (13)

A pole at least ten feet long is placed across wooden horses, four feet above the floor or ground. The opponents straddle pole armed with pillows and endeavor to dislodge each other by hitting with pillows.



Pillow Fight

Hello, Mike (14)

Equipment Needed: Boxing gloves. Two blindfolded opponents lie upon floor face down with their heads toward each other and about a foot apart. They reach above their heads with their left arms, grasping hands. Their right hands are covered with boxing gloves.

Number one says, "Hello, Mike, are you there?" Number two is required to answer, "I am," trying to deceive his opponent as to location. Number one takes one swing with his gloved hand at the point where the voice comes from. Number two then asks the question and the game continues.

Cracker Eating Contest (15)

Five crackers are given each contestant. At the signal to start he begins eating same. The one who consumes the five and is able to whistle first wins the event. (Melon Eating).

Weight Guessing (16)

The object of the game is to make a guess at the weight of some man in the audience or crowd. Post five or six men to paddle the man being weighed when on the weigher's back. The weigher, picking his victim, feels of his legs and his arms and then says he can guess within three pounds of the man's weight. If the man permits the weigher steps in front of the victim, taking his two arms over his shoulders, and bending forward, lifts the man, raising his feet off the ground, saying, "You weigh about," the word "about" being the cue for the five or six men posted to start paddling his stern.

The Ghost (17)

The individual who puts on the stunt calls for eight or more volunteers. He arranges them in a straight line, elbow to elbow, as close together as possible, and takes his place at the left of the line. Addressing the one who stands at his right he says, "Last night I saw a ghost at my house." The one addressed replies, "Is that so? What did he do?" The leader then sticks his right arm straight out in front of him. The one next to the leader then turns and addresses the individual at his right, making the same statement regarding a ghost at his house last night, and when the individual replies asking what he did, the informer sticks out his right arm, as did the leader. The question, answer and performance are passed down the line. This results in every man in the line having his right arm sticking straight out before him. With the arm in this position the leader again makes the statement that he saw a ghost in his house last night. The one at his right asks what he did, as before. The leader replies that he did this—and sticks out his left arm. This is repeated until all have both left and right arms projecting in front. Starting at the head of the line the leader then makes the statement and illustrates what the ghost did by assuming a squatting position, leaving both arms out in front. When the whole line has assumed this squatting position after the regular question is asked, the leader starts again, this time sticking one leg out in front, clear off the floor. After the question has been passed down the line,

the individuals are all balancing themselves on one leg, with the other leg and both arms projecting before. The leader by giving a slight shove overbalances the group and a pile results.

Lifting Seven Men (18)

This is a frame-up and should be used particularly to take care of fresh individuals in the camp. Some fellow boastfully says he can lift seven men in the hearing of the fresh one. He, of course, argues the point immediately. A strong man then performs the feat as follows: He lies down on his back. Six other men who are in on the trick sit with their legs across his body. The fresh one is then invited to be the seventh man to be lifted and is asked to lie face down lengthwise across the knees of the six others, his head and shoulders being near the head and shoulders of the strong man who assists in holding him in this position while the other six administer the paddling.

Pie Eating Contest (19)

Equipment Needed: Four nice juicy blueberry pies. Eight men. The pies are cut in half, being placed in a tin plate, and placed on the table or on the floor. If on the floor the men kneel. The contestant's hands must be tied behind him. The object of the game is to see which man can eat his pie the quickest. He must do this without the aid of his hands, and must not be allowed to push pie out of pan. Upon licking the plate clean, he picks up the plate in his teeth. The first man doing this wins. *Note.* This is a great stunt with which to finish up a stunt night.

Can and Glove Boxing (20)

Opponents are armed with a can containing pebbles in their right hand and a boxing glove on their left. Both are blindfolded. They rattle can continuously, endeavoring to locate each other by sound in order to land blow with glove hand.

Barrel Boxing (21)

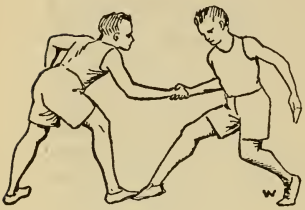
Secure two large barrels, extracting projecting nails. Place opponents inside of same and have them box. *Note.* A potato sack can be used as a substitute for barrels in this event.

Hot Hand (22)

One man who is "it" bends forward, placing his hands on his knees. The other players gather behind him and swat him with the palms of their hands. If he guesses the one who hits him that one must take his place.

DUAL STRENGTH TEST

Large groups can be divided into equal smaller groups and compete in the following events to good advantage. These events can also be used successfully as events for stunt night programs. Have the winner challenge anyone in the audience.



Hand Wrestling

Hand Wrestling (1)

The wrestlers stand with right foot advanced clasping right hands. The object is to make opponent move a foot from its position on the ground. This constitutes a throw.



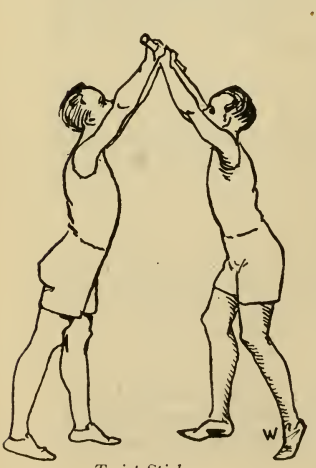
Toe Wrestling

Toe Wrestling (2)

The wrestlers are seated on the ground facing each other's knees. A stick is placed between the arms and knees while in this position. The object is to get the toes under those of the opponent and roll him over backwards. If either wrestler breaks his handclasp about the knees it constitutes a victory for his opponent.

Indian Wrestling (3)

The wrestlers lie upon backs side by side with arms locked, legs extended in opposite directions. The right legs are raised and lowered twice. At the third raising they lock legs together and each endeavors to bring his opponent's leg down to the ground, thereby turning him upon his face.



Twist Stick

Twist Stick (4)

Two grasp a gun or broomhandle high above their heads. At the word to go the stick must be brought down between them, thereby twisting within the hands of one of the players. This can be done without stick by having opponents grasp hands above head, fingers between fingers.

Pull Stick (5)

Two sit upon the floor, toes against toes. They grasp a broomhandle between them, and at the signal each tries to pull the other up off the floor. Can be used without stick by opponents grasping hands, using the hook grasp.

Rooster Fight (6)

A circle four feet in diameter is drawn upon the floor or ground. Two players standing on one leg, both hands grasping the other foot behind their backs, endeavor to make the other step outside of the ring or break his clasp upon the upheld foot, by shouldering each other.



Rooster Fight

Knocking Off Hat (7)

Two, by sparring together endeavor to knock off the opponent's hat.

Dog Fight (8)

Two place themselves on hands and knees facing each other about three feet apart. Their leather belts are linked together. The linked belts are thrown over their heads. The players must keep heads up and back. At the word "Go," the players pull against each other until one of them is pulled across the line three feet back from where the players started, or until his head is pulled forward thereby releasing the strap.

Elbow Wrestling (9)

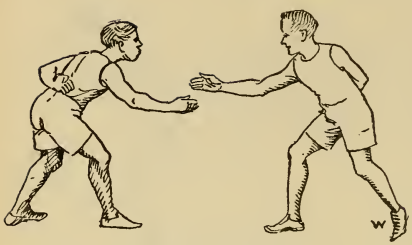
A table or some flat surface is necessary for this event. The opponents stand on opposite sides of the table placing the right elbows together on same. They clasp hands and endeavor to push the back of the hand of the opponent down to the table without lifting the elbow.

Harlequin Wrestle (10)

Each contestant stands on one leg, one leg and arm swinging free. They grasp right hands and each tries to make the other lower his upraised foot to the ground, or touch the floor with his free hand. Losing balance or touching floor with free hand or foot constitutes a fall. A fall may be produced only with the engaged hand.

La Savate (11)

Two contestants fold arms, hop on one foot until each is within touching distance with their free feet, then by feinting or tapping with the free foot cause the opponent to lose his balance and touch floor with free foot. (From the French boxing contests where the feet are used.)



Hand Slap Wrestle

Hand Slap Wrestle (12)

Same formation as above. Players stand about two feet apart with each player's feet in a line, toe and heel touching, left arm placed behind back, right arm swinging free in front. The player, by striking, feinting, or evading tries to cause his opponent to lose his balance. This constitutes a fall. The fallen player's place is taken by another player from his own team. This continues until all of one team have been thrown. The team wins which has the last boy standing.

APPENDIX

HISTORICAL STATEMENT

EDGAR M. ROBINSON

Senior Secretary of Boys' Work Division, International Committee of Young Men's Christian Associations

One of the outstanding characteristics in the organization of the Young Men's Christian Association has been the emphasis placed upon the local autonomy and independence of each individual Association.

The supervising committees have been created by the local Associations in convention assembled, and continued to operate under the instruction of such conventions. This complete liberty and responsibility of each local unit has had much to do with the development of the almost endless varieties of Association effort. No set pattern or program has been handed down from a central authority, but the fundamental ideals of the Association have been preserved, notwithstanding this. While the Association movement as a whole has lacked uniformity, it has not lacked unity.

To introduce a standardized, graded program into an organization with such history and traditions would be quite impossible, were it not for the almost unanimous consciousness of need and desire for something of this kind. Local Associations which were acutely conscious of how "peculiar" their fields were, and how much they differed from other Association fields, also became increasingly conscious of the number of problems that were identical in every field. While Associations justly resent any movement which would tend to deprive them of their individuality, they eagerly welcome any plan which is the result of "pooled" experience and which helps them in *their common problems.*

Many years ago it was found, through physical department activities, that boys took pride in their records of achievement and would work diligently to measure up to some set standard or requirement in order to receive the recognition. Gradually

this idea of giving boys credits, or points, or counts, was introduced into other activities beside the physical. Long before the year 1908 such credits were being given by various Associations in varying ways. One of the most elaborate of these local plans, however, was printed in *Association Boys* in 1908 under the title of "The Tuxis System," which was devised by Harvey L. Smith, then Boys' Work Secretary in the Bedford Branch, Brooklyn. Part of this plan had been operated by Mr. Smith in his previous secretaryships in New Haven and Providence. Valuable contributions in this direction were also made by John L. Alexander, as Boys' Work Secretary in Philadelphia, and later as Superintendent of the Secondary Division of the International Sunday School Association, M. D. Crackel, Boys' Work Secretary of Cleveland, and a number of others.

The idea of charting a boy with reference to the activities in which he was undeveloped or over-developed, probably originated with Walter M. Wood, General Secretary of Philadelphia, while the charting plan seems to have been first adequately developed by Taylor Statten, National Boys' Work Secretary of Canada. So many men at different times have contributed different items, it is impossible to record the credit that is due to each one.

So rapidly did this general idea spread and develop, the National Council of Canada began to correlate the efforts and developed a system of tests in 1912 under the name of the "Canadian Standard Efficiency Tests."

Shortly after this the Association of Boys' Work Secretaries of North America appointed a special committee to develop a somewhat similar program for general use in the United States, and some valuable work was done. In May, 1916, the International Committee was requested to become responsible for the development of this program, the National Council of Canada having graciously granted the Committee the use of any of its copyrighted material in connection with the Canadian tests.

A committee of fifteen was called together, representing the Religious Education Association, the Federal Council of Churches of Christ in America, the International Sunday School Association, the Sunday School Council of Evangelical Denominations, and the International Committee of Young Men's

Christian Associations, to discover if an American Standard Program for boys could be jointly developed and promoted. The American Standard Program as then developed was offered to this committee by the International Committee of Young Men's Christian Associations, with the hope that each of the other bodies would make similar contribution to a joint program.

Several meetings of this Commission were held, but a number of difficulties presented themselves which prevented unanimous and joint action, so on September 28, 1917, the following resolution was passed:

Whereas the Commission on Religious Education of the Religious Education Association is engaged upon an investigation similar to that undertaken by the Commission on the Standard Program of Boys' Work, therefore, be it resolved that the Commission suspend operation for the present. Second, that the Chairman of the Commission be authorized to convene the Commission at any convenient time, upon the request of the representatives of any constituent body. Third, that pending definite action by the Commission, each constituent body will be at liberty to conduct independent investigation and experimentation in its direction.

Following this resolution, the International Committee again resumed its work with the program and printed a second proof edition in which the form of the material was changed while the content remained the same.

A thorough revision was then undertaken by members of the International Boys' Work Staff and by scores of State and Local Boys' Work Secretaries and others. Through correspondence and by conferences, gradually there was built up an elaborate program, which was submitted to a general conference of Association men in Atlantic City in December, 1918, and to a conference of boys' work men in Chicago the same month. Still further revisions resulted. Dr. Sidney A. Weston and Professor E. P. St. John gave much valuable time and many helpful suggestions, especially in connection with parts of the program for Comrades, in adapting the material for use with the Sunday school program for boys of this age. Other recognized leaders in the field of religious education had already been consulted, and had given helpful and constructive criticism. The program as it

stands today is the product of many men of recognized ability and experience.

With the full consciousness that any program of this character must be tested out in the laboratory of experience, and that as large volumes of experience are pooled changes, additions, and modifications of the program may seem wise from time to time, nevertheless this program is recommended in its present form by men who have given careful thought to the matter and who have had years of experience in practical boys' work, and by men of recognized ability in the field of religious education, as the best all-round graded program of religious education yet devised for boys, and it is hoped that it will be found sufficiently rigid and yet sufficiently elastic to constitute the minimum program which will be used and recommended by the Young Men's Christian Associations and other organizations which desire it throughout the country.

INSIGNIA AND REGISTRATION

Classes of Insignia

A very simple insignia has been devised for the entire Program. It may or may not be used, just as the individual group may determine. Every effort has been made to make it inexpensive, yet effective and attractive.

Regulation Pins and Watch Fobs

The regulation pins and watch fobs may be obtained in a variety of types and sizes; for the official design see illustration. (Price list furnished upon application.)



PIONEERS COMRADES LEADERS

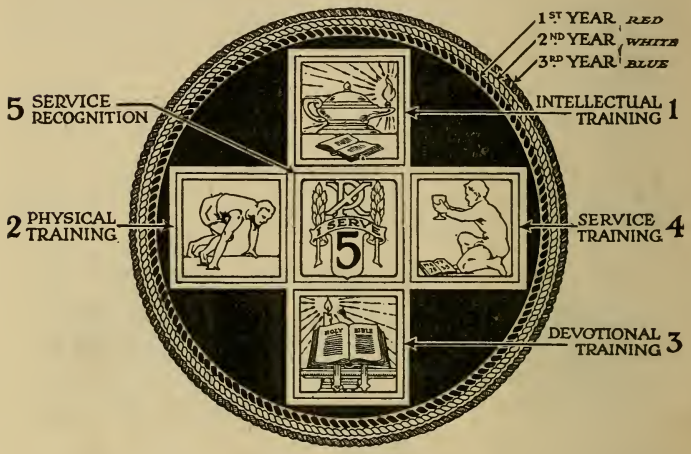
These pins have been designed to show simply that the wearer is actually identified with the all-round Program of development and to show which particular group of the Program he is taking. The *Leader's* pin for both Pioneer and Comrade groups is the same.

The Sweater Emblem

A more elaborate emblem has been devised for the sweater. (See the complete emblem in the illustration.)

The Swiss cross is chosen as the symbol of fourfold development. The circle suggests complete living. Each arm of the cross is taken to represent one phase of development: top (No. 1), the Intellectual Training Program; left (No. 2), the Physical Training Program; lower (No. 3), the Devotional Training Program; right (No. 4), the Service Training Program. An

emblem suggestive of each side of the program has been devised and may be earned by the boy in any one of three colors, red, white, or blue. If the boy averages fifty per cent or below in any one of the standards at his initial charting interview, he must wear a *red* emblem, but if he averages above fifty per cent and under seventy-five per cent, he must wear a *white* emblem. If,



on the other hand, his average in any one of the four standards is above seventy-five per cent as shown by the interview, he is entitled to wear the *blue* emblem; thus his built-up insignia shows his standing.

Both PIONEERS and COMRADES have three one-year programs of activity. The silk cords (see illustration) about the basic circle of the insignia are to represent these years of work. A boy taking the first year's work in either group will add the first or red cord; when he passes into the second year's work, he will add the second, or white cord; when he passes into the third year's work, he will add the third or blue cord. Likewise if he *enters* the group program when the group is using the second year's tests, he will wear on his insignia only the white cord instead of the red and white, or in the third year, only the blue cord, instead of the red, white, and blue.

The Service Recognition Insignia

The very soul of the Program is service, consequently the center of the insignia is reserved for the *Service Recognition* numerals. (For full explanation of the Service Recognition plan see Chapter VI, this manual.)

The Service Recognition emblems are made bearing heavy numerals. The numeral worn by any boy shows the total number of Service Recognitions that he has been awarded, without regard to the particular type of service rendered. This method is used to overcome the undesirability of *rewarding* in any way for service. As the boy develops the service side of his life to the maximum, he changes the numeral from 1 up to a possible 6. The *Leader* of a group should have on hand a supply of Service Recognition emblems of the various numerals so that the changes may be made quickly either by exchange or by supplying additional emblems.

Difference of Insignia for Pioneers and Comrades.

The only difference between the insignia for PIONEERS and COMRADES is that the basic circle used in PIONEER insignia is black in color, while the basic circle for the COMRADES is tan in color. Each boy should be encouraged to keep all pieces of insignia earned, dating each piece, but should wear only such as show the result of his latest interview and charting.

A Suggestive Group Insignia

It will be easily understood how in exactly the same way an accurate insignia for any group may be built up, showing the Intellectual, Physical, Devotional, and Service standing of the group as a whole. The *Service Recognition* numeral of the group would then, of course, be the total of the individual Service Recognition numerals of all members of the group. A new group insignia should be made each year, following the annual charting of all members in order to bring it strictly up to date. Special group insignia of a large size can be secured from Association Press, 347 Madison Avenue, New York City. Price upon application. Such an all-round development pennant would be very valuable for conferences, camp, conventions, and the like, and

its proper display would greatly stimulate the use of the Program by other groups.

Other Insignia

In addition to the regular official insignia a group may adopt for local use any additional uniform or insignia—such as colored caps, sweaters, and so forth—that it cares to.

Local Organization and Administration

It should be constantly borne in mind that this entire plan of graded material is essentially a *program* and not a new organization for boys. Consequently, the organization and administrative features have been kept as simple as possible; every stumbling block and obstacle to local initiative and control has been eliminated; on the other hand, if national recognition is to be given, the national awards and insignia must be reasonably protected. The following very simple plan has been devised for present use. What the future may hold no one can at this time determine.

Creating a Local Cooperative Committee

For the time being, pending possible revisions or new cooperative relationships, a local Cooperative Committee shall be composed of at least three men, officially designated from and adequately representing the Christian churches and interests (including the Young Men's Christian Association).

(Where there is no local Y. M. C. A., a representative of the County or State Committee should be made a member of this local committee.)

This committee shall apply for official registration at the nearest of the regional offices named below. The fee for registering each local Cooperative Committee is one dollar.

The following are the present regional offices of the International Committee:

Eastern. International Boys' Division, 347 Madison Avenue, New York, N. Y.

Central. International Boys' Division, Room 1500, 19 South La Salle Street, Chicago, Ill.

WESTERN. International Boys' Division, 229 Association Building, Denver, Colo.

SOUTHERN. International Boys' Division, 1610 Candler Building, Atlanta, Ga.

Registering Leaders

Leaders can only be registered through a local *Cooperative Committee.*

The local *Cooperative Committee* shall forward to the nearest regional office of the International Committee a properly filled out *Leader's* Registration Blank, and the sum of one dollar for each *Leader* it registers, to cover costs of registration.

The registration of *Leaders* shall be for the calendar year only, a re-registration of all *Leaders* being required each year.

Securing Insignia

National insignia may be secured from Association Press, 347 Madison Avenue, New York City, or from any one of its official repositories (cash with order—price list and information upon application) upon the presentation of suitable identification as a registered *Leader.* (Printed order blanks and identification slips will be supplied each local Cooperative Committee upon registration.)

Cooperation with State Committees

The regional offices shall file with each state office early record of all registrations of local Cooperative Committees and *Leaders* within their several states, and such other facts and information as may be valuable to any given state in adequately promoting the best interests of the Program.

How to Organize Locally

Create a local Cooperative Committee. Get in touch personally or by correspondence with your local or nearest supervisory office of the Y. M. C. A. (see list of state offices below) and request that a representative meet with your newly created committee to talk over the whole matter of organization and promotion. This representative will come prepared to explain fully the Program and its objectives.

Next, select the *Leaders* for the various groups that are to use the Program and register them at the nearest regional office upon regular *Leader's* Registration Blanks that will be supplied upon request.

Next, take steps, under the direction of the Y. M. C. A. representative or other qualified party, to train adequately your registered *Leaders*. Not only the content but the objects and purposes of the Program should be well understood by each *Leader* before he attempts to use it with a group of boys. This training will, of course, include a thorough reading of both the boys' handbook and the Leader's manual to be used. If you have questions or wish further information that you cannot get locally, write either your state or regional office. Bulletins and printed matter, bearing on the Program, also order blanks for supplies, samples of various records, etc., will be mailed each *Leader* upon registration.

Too great stress cannot be laid upon the absolute necessity of adequately training leadership. Under all circumstances avoid beginning the Program with any group for which you cannot supply a reasonably trained *Leader*. Avoid widespread promotion for which you are not prepared. The Program is not a new collection of entertaining stunts but a program of character building, dealing with the fundamentals of boy life. Plan carefully and thoroughly. Hasty and superficial organization means ultimate failure. Seek counsel. Study the manuals. Then proceed, determined to succeed.

State Committees of Young Men's Christian Associations

(Address correspondence to Boys' Division)

Alabama	526 North 20th Street, Birmingham
Arizona	711 Caples Bldg., El Paso, Texas
Arkansas	603 A. O. U. W. Bldg., Little Rock
California	325 First Nat'l Bank Bldg., San Francisco
Colorado	25 East 16th Avenue, Denver
Connecticut	177 Church Street, New Haven
Delaware	20 West Franklin Street, Baltimore, Md.
District of Col.	20 West Franklin Street, Baltimore, Md.
Florida	Y. M. C. A., Jacksonville

Georgia	1602 Candler Bldg., Atlanta
Idaho	195 Sixth Street, Portland, Ore.
Illinois	19 South La Salle Street, Chicago
Indiana	615 Majestic Bldg., Indianapolis
Iowa	807 S. and L. Bldg., Des Moines
Kansas	613 New England Bldg., Topeka
Kentucky	221 West Broadway, Louisville
Louisiana	509 Maison-Blanche Annex, New Orleans
Maine	Savings Bank Bldg., Waterville
Maryland	20 West Franklin Street, Baltimore
Massachusetts	167 Tremont Street, Boston
Michigan	Adams Avenue and Witherell Street, Detroit
Minnesota	30 South Ninth Street, Minneapolis
Mississippi	Daniels Bldg., Jackson
Missouri	114 North Seventh Street, St. Louis
Montana	27 Babcock Theater Bldg., Billings
Nebraska	951 Omaha Nat'l Bank Bldg., Omaha
New Hampshire	39 North Main Street, Concord
New Jersey	Room 1006, 671 Broad Street, Newark
New Mexico	711 Caples Bldg., El Paso, Texas
New York	2 West 45th Street, New York
North Carolina	350 South Tryon Street, Charlotte
North Dakota	Roberts Street and First Avenue, Fargo
Ohio	36 South Third Street, Columbus
Oklahoma	Patterson Bldg., Oklahoma City
Oregon	195 Sixth Street, Portland
Pennsylvania	408 Calder Bldg., Harrisburg
Rhode Island	167 Tremont Street, Boston, Mass.
South Carolina	122 Sumter Street, Columbia
South Dakota	305 Boyce-Greeley Block, Sioux Falls
Tennessee	226 Seventh Avenue, North, Nashville
Texas	611 Sumter Bldg., Dallas
Western Texas	711 Caples Bldg., El Paso
Vermont	171 College Street, Burlington
Virginia	Chamber of Commerce Bldg., Richmond
Washington	Fourth Avenue and Madison Street, Seattle
West Virginia	1406 G Street, N. W., Washington, D. C.
Wisconsin	147 Fourth Street, Milwaukee
Hawaii	Y. M. C. A., Honolulu

LEADER'S REGISTRATION BLANK

Name_____ Age_____

City or Town_____

Home Address_____

Occupation_____

State briefly former boys' work experience: _____

What study or training for boys' work have you previously had?

Have you had specific training for this Program?_____

What?_____

By whom taught?_____

Have you carefully read the Handbook and Manual?_____

To what local institution is the proposed group of boys attached?

Church_____

Y. M. C. A._____

Club _____

Of what Christian denomination are you a member?_____

Name of church?_____

Number of boys in proposed group?_____ Average age?_____

Is your group an old organization now proposing to use the Program?

Is your group a new organization beginning an all-round program for the first time?_____

(Signature of applicant)

(Certification by Local Committee, attached to Leader's Registration Blank.)

To the Regional Office, (Address)____ _____
International Committee
Young Men's Christian Association.

We hereby request your office to issue Registered *Leader's* Certificate to Mr._____, who, in our judgment has the capacity and training necessary to successfully organize and administer this all-round program of character-building with a group of boys.

If this application is accepted, we, a regularly organized and registered local Cooperative Committee, agree to give Mr._____ _____'s group our best support and counsel in the development and expansion of the program to the end that his boys may be led into a definite plan of all-round Christian living.

Signed by_____

For (Name of State)_____Committee No._____

Date_____

Received_____ By_____

Registered Certificate No._____issued_____(date)_____

Memoranda filed with (State) Office_____(date)_____

Information packet, sample forms, etc., mailed_____(date)_____

COOPERATIVE COMMITTEE REGISTRATION BLANK

To the Regional Office, (Address of regional office)
International Committee
Young Men's Christian Association.

Gentlemen:

We, the undersigned, representing the various Christian churches and interests of request that we be registered as an official local Cooperative Committee and authorized to:

1. Organize and promote the Program of Christian Citizenship Training in this locality.
2. Enlist and train prospective *Leaders* for groups.
3. Accept and submit for registration local *Leaders*.
4. Issue and supply, to such registered *Leaders*, national insignia, supplies, and service recognitions.
5. Issue and sell to the general public manuals, handbooks, and general promotion literature as it may develop.

It is clearly understood by us that this Program is especially designed for use of any party interested in bringing about the all-round Christian development of boys and will be administered by us with that end in view.

We agree to:

1. Annually submit a simple report of facts and figures on progress made (blank to be supplied).
2. Adapt local organization and control so as to best meet the boy needs of the whole community.
3. Select, inspire, and register likely *Leaders* of groups.
4. Promote or aid in formulating adequate plans to train sufficient leadership for the natural growth of the Program in the locality.

Signed:

Mr._____Representing_____
Mr._____Representing_____
Mr._____Representing_____

(Place additional names on back of this page.)

Correspondence and business matters with this Committee to be taken up with: _____Name
_____Address

Received_____(date)_____ By_____
Registration Certificate No._____issued_____(date)_____
Memoranda filed with____(State)____Office____(date)_____
Information packet, sample forms, order blanks, etc., mailed_____

STANDARD PHYSICAL EXAMINATION BLANK

Name _____

Address _____ School / Firm _____

Father's Name _____ Business Address _____ Phone _____

Family Health _____

PERSONAL HISTORY

Diseases and Accidents _____

General Health _____

Hours of Sleep _____ Tobacco _____

Physical Activities Practiced _____

Remarks:

Physical Director

Date	19	19	19	Eyes	
Age				Teeth	
Weight				Throat	
Height				Ears	
Inspection				Circulation	
Posture	Shoulders			Heart	
	Scapulæ			Blood Vessels	
	Thorax			Normal Pulse	After Ex. 20 Squats
	Spine			Respiration	
	Legs			Condition of Lungs	
	Feet			Type of Respiration	
Skin				Generative Organs	
Musculature				Phimosis	
				Varicocele	
				Hernia	

Remarks:

Examiner

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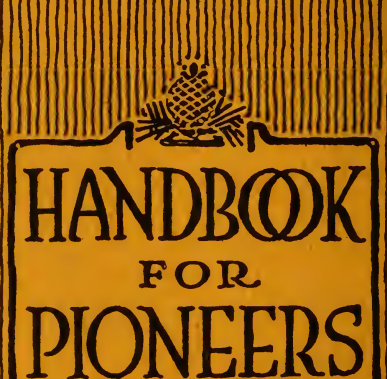
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